

SAFETY DATA SHEET



ALKYLATE MGBLEND

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : ALKYLATE MGBLEND

EC number : 265-066-7

REACH Registration number

Registration number

01-2119485026-38-0005

01-2119485026-38-0006

01-2119485026-38-0009

CAS number : Not available.

Product description : petroleum hydrocarbons

Other means of identification : ALKYLATE MGBLEND

1.2 Relevant identified uses of the substance or mixture and uses advised against

Intended Use : Refinery process stream

Identified uses

Use in coatings - Professional
Use in cleaning agents - Consumer
Use in cleaning agents - Professional
Use in cleaning agents - Industrial
Formulation and (re)packing of substances and mixtures
Use in coatings - Industrial
Distribution of substance
Use in rubber production and processing
Manufacture of substance
Use as an intermediate
Use as a fuel - Industrial
Use as a fuel - Professional
Use as a fuel - Consumer
Manufacture of other substances

1.3 Details of the supplier of the safety data sheet

Supplier : ExxonMobil Petroleum & Chemical BV
POLDERDIJKWEG
Antwerpen B-2030 Belgium

Supplier General Contact : +32 3 790 3111
e-mail address of person responsible for this SDS : SDS-DS@exxonmobil.com

SDS Internet Address : www.sds.exxonmobil.com

1.4 Emergency telephone number

**National advisory body/
Poison Centre** : (+32)70 245 245

**24 Hour Emergency
Telephone** : +32 2 808 32 37 / +1-703-527-3887 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : UVCB

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 1, H224

Skin Irrit. 2, H315

Carc. 2, H351

Repr. 2, H361fd

STOT SE 3, H336

Asp. Tox. 1, H304

Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H224 - Extremely flammable liquid and vapour.
- H304 - May be fatal if swallowed and enters airways.
- H315 - Causes skin irritation.
- H336 - May cause drowsiness or dizziness.
- H351 - Suspected of causing cancer.
- H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.
- H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention :

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 - Ground and bond container and receiving equipment.
- P241 - Use explosion-proof electrical, ventilating or lighting equipment.
- P242 - Use non-sparking tools.
- P243 - Take action to prevent static discharges.
- P261 - Avoid breathing vapour.
- P264 - Wash thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Response :

- P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P304 + P312, P340 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. Remove person to fresh air and keep comfortable for breathing.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P332 + P313 - If skin irritation occurs: Get medical advice/attention.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.
- P391 - Collect spillage.

ALKYLATE MGBLEND

SECTION 2: Hazards identification

| | |
|--|---|
| Storage | : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool. P405 - Store locked up. |
| Disposal | : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Hazardous ingredients | : naphtha (petroleum), full-range alkylate |
| Supplemental label elements | : Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : 48, 72, 3 |

2.3 Other hazards

| | | | | | | | | |
|---|---|--|-----|-----|-----|------|-----|-----|
| Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII | : | PBT | P | B | T | vPvB | vP | vB |
| | | N/A | N/A | N/A | Yes | N/A | N/A | N/A |
| Other hazards which do not result in classification | : | None known. | | | | | | |
| Nota | : | This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person. | | | | | | |

SECTION 3: Composition/information on ingredients

3.1 Substances : UVCB

| Product/ingredient name | Identifiers | % by weight | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|--|--|-------------|--|---|------|
| naphtha (petroleum), full-range alkylate | REACH #: 01-2119485026-38 EC: 265-066-7 CAS: 64741-64-6 | 100 | Flam. Liq. 1, H224 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 | - | [1] |
| n-hexane | EC: 203-777-6 CAS: 110-54-3 | <3 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361f STOT SE 3, H336 STOT RE 2, H373 (peripheral nervous system) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 | Repr. 2, H361f: C ≥ 52% STOT RE 2, H373: C ≥ 52% | [1] |
| toluene | REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 | <3 | Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 (central nervous system (CNS)) | - | [1] |

ALKYLATE MGBLEND

SECTION 3: Composition/information on ingredients

| | | | | | |
|-------------|---|----|--|---|-----|
| naphthalene | REACH #: 01-2119561346-37 EC: 202-049-5 CAS: 91-20-3 | <1 | Asp. Tox. 1, H304 Aquatic Chronic 3, H412 Flam. Sol. 2, H228 Acute Tox. 4, H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above. | ATE [Oral] = 500 mg/kg M [Acute] = 1 M [Chronic] = 1 | [1] |
|-------------|---|----|--|---|-----|

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[1] Constituent

Occupational exposure limits, if available, are listed in Section 8.

Nota :

Hydrogen sulfide (H2S) may be present in the material in trace quantities (by weight) and, when present, may accumulate to toxic or flammable concentrations in enclosed spaces such as tanks or tanker/railcar headspaces.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact

: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 10 minutes. Get medical attention.
- Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
Respiratory and eye irritation, coughing, a sensation of dryness and pain in the nose, and loss of consciousness.
Numbness, muscle cramps, weakness and paralysis that may be delayed.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
Local necrosis as evidenced by delayed onset of pain and tissue damage a few hours after injection.
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. This material, or a component, may be associated with cardiac sensitization following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine. Administration of such substances should be avoided.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Specific hazards arising from the chemical** : Extremely flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Aldehydes, hydrogen sulphide, Incomplete combustion products, Oxides of carbon, Smoke, Fume, sulfur oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- Special protective actions for fire-fighters** : Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Assure an extended cooling down period to prevent re-ignition. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. If the Flash Point exceeds the Ambient Temperature by 10 deg C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. Seek the advice of a specialist before using dispersants. Warn other shipping. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ALKYLATE MGBLEND

SECTION 6: Accidental release measures

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Harmful amounts of H2S may be present. Avoid breathing vapours, spray or mists. The toxic and olfactory (sense of smell) fatigue properties of hydrogen sulfide require that air monitoring alarms and respiratory protection be used where the concentration might be expected to reach a harmful level, such as in an enclosed space, heated transport vessel, or in a spill or leak situation.
- Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Static Accumulator : This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

| Named substances | | |
|--|---------------------------------|-------------------------|
| Name | Notification and MAPP threshold | Safety report threshold |
| Petroleum products and alternative fuels (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams) (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d) | 2500 tonne | 25000 tonne |

ALKYLATE MGBLEND

SECTION 7: Handling and storage

Danger criteria

| Category | Notification and MAPP threshold | Safety report threshold |
|-----------|---------------------------------|-------------------------|
| P5a E2 | 10 tonne 200 tonne | 50 tonne 500 tonne |

7.3 Specific end use(s)

Recommendations : Not available.
Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|--|---|
| naphtha (petroleum), full-range alkylate | ExxonMobil (Company). STEL: 200 ppm, (Total Hydrocarbons) Form: Vapour and aerosol. TWA: 100 ppm, (Total Hydrocarbons) 8 hours. Form: Vapour and aerosol. |
| n-hexane | Limit values (Belgium, 5/2021). TWA: 20 ppm 8 hours. TWA: 72 mg/m³ 8 hours. EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values TWA: 72 mg/m³ 8 hours. TWA: 20 ppm 8 hours. ACGIH TLV (United States, 1/2023). Absorbed through skin. TWA: 50 ppm 8 hours. |
| toluene | Limit values (Belgium, 5/2021). Absorbed through skin. TWA: 20 ppm 8 hours. TWA: 77 mg/m³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 384 mg/m³ 15 minutes. EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 192 mg/m³ 8 hours. TWA: 50 ppm 8 hours. STEL: 384 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. ACGIH TLV (United States, 1/2023). Ototoxicant. TWA: 20 ppm 8 hours. |
| naphthalene | Limit values (Belgium, 5/2021). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 53 mg/m³ 8 hours. STEL: 15 ppm 15 minutes. STEL: 80 mg/m³ 15 minutes. EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours. ACGIH TLV (United States, 1/2023). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 52 mg/m³ 8 hours. |

ALKYLATE MGBLEND

SECTION 8: Exposure controls/personal protection

| | |
|-------------------|--|
| hydrogen sulphide | <p>[Air contaminant - Decomposition product(s)] Limit values (Belgium, 5/2021). TWA: 1.64 ppm 8 hours. TWA: 2.3 mg/m³ 8 hours. STEL: 4 ppm 15 minutes. STEL: 5.61 mg/m³ 15 minutes.</p> <p>[Air contaminant - Decomposition product(s)] EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values TWA: 7 mg/m³ 8 hours. TWA: 5 ppm 8 hours. STEL: 14 mg/m³ 15 minutes. STEL: 10 ppm 15 minutes.</p> <p>[Air contaminant - Decomposition product(s)] ACGIH TLV (United States, 1/2023). TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.</p> <p>[Air contaminant - Decomposition product(s)] ExxonMobil (Company). STEL: 10 ppm 15 minutes. STEL: 14 mg/m³ 15 minutes. TWA: 5 ppm 8 hours. TWA: 7 mg/m³ 8 hours.</p> |
|-------------------|--|

Hydrogen sulfide (H2S) may be present in the material in trace quantities (by weight) and, when present, may accumulate to toxic or flammable concentrations in enclosed spaces such as tanks or tanker/railcar headspaces. The ExxonMobil OEL for H2S is 5 ppm (8-hr TWA) and 10 ppm for 15 min STEL.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|--|------|----------------------|-------------------|--------------------|----------|
| naphtha (petroleum), full-range alkylate | DNEL | Long term Inhalation | 180 mg/m³ | General population | Local |
| | DNEL | Long term Inhalation | 840 mg/m³ | Workers | Local |
| toluene | DNEL | Long term Dermal | 384 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 226 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Oral | 8.13 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 56.5 mg/m³ | General population | Systemic |
| | DNEL | Long term Inhalation | 192 mg/m³ | Workers | Systemic |

PNECs

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------|------------------------|----------------|---------------|
| toluene | Marine water | 0.68 mg/l | - |
| | Sewage treatment plant | 13.61 mg/l | - |
| | Fresh water | 0.68 mg/l | - |
| | Marine water sediments | 16.39 mg/kg dw | - |
| | Fresh water sediment | 16.39 mg/kg dw | - |
| | Soil | 2.89 mg/kg | - |

8.2 Exposure controls

- Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): Nitrile, minimum 0.38 mm thickness or comparable protective barrier material
CEN standards EN 420 and EN 374 provide general requirements and lists of glove types.
- Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection

: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Positive-pressure, air-supplied respirator in areas where H2S vapours may accumulate is recommended.
European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

SECTION 8: Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.
Colour : Colourless
Odour : Petroleum/Solvent
Odour threshold : Not available.
pH : Not applicable.
Melting point/freezing point : Not available.
Boiling point, initial boiling point, and boiling range : ≤35°C (≤95°F) [ASTM D86]
Flash point : Closed cup: ≤0°C (≤32°F) [ASTM D-56]
Evaporation rate : Not available.
Flammability : Flammable liquids - Category 1
Lower and upper explosion limit : Lower: 0.6%
Upper: 8%
Vapour pressure : 30 to 1800.15 mm Hg [37.8 °C]
Relative vapour density : >1 [Air = 1]
Relative density : <1
Density : 0.62 to 0.88 g/cm³ [15°C (59°F)]
Solubility in water : Negligible
Partition coefficient: n-octanol/ water : >3.5
Auto-ignition temperature : >280°C (>536°F)
Decomposition temperature : Not available.
Viscosity : <1 cSt [40 °C] [ISO 3104]
Particle characteristics
Median particle size : Not applicable.

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

ALKYLATE MGBLEND

SECTION 10: Stability and reactivity

- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:,oxidising materials,Halogens, strong acids, Strong oxidisers, Alkalies
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|------------------------|---------|-------------|----------|
| naphtha (petroleum), full-range alkylate | LC50 Inhalation Vapour | Rat | >5000 mg/m³ | 4 hours |
| naphthalene | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| | LC50 Inhalation Vapour | Rat | >0.4 mg/l | 4 hours |
| | LD50 Oral | Mouse | 533 mg/kg | - |

Conclusion/Summary

- Inhalation** : Minimally Toxic. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403
- Dermal** : Minimally Toxic. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
- Oral** : Minimally Toxic. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|-------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| naphthalene | 500 | N/A | N/A | N/A | N/A |

Irritation/Corrosion

Conclusion/Summary

- Skin** : Irritating to the skin. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404
- Eyes** : May cause mild, short-lasting discomfort to eyes. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
- Respiratory** : Negligible hazard at ambient/normal handling temperatures. No end point data for material. Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.

Sensitisation

Conclusion/Summary

- Skin** : Not expected to be a skin sensitizer. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406
- Respiratory** : Not expected to be a respiratory sensitizer. No end point data for material.

Mutagenicity

- Conclusion/Summary** : Not expected to be a germ cell mutagen. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 475 476

Carcinogenicity

ALKYLATE MGBLEND

SECTION 11: Toxicological information

Conclusion/Summary : May cause cancer. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 451

Reproductive toxicity

Conclusion/Summary : May damage fertility. May damage the unborn child. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 416 421

Specific target organ toxicity (single exposure)

Conclusion/Summary : May cause drowsiness or dizziness. No end point data for material.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Not expected to cause organ damage from prolonged or repeated exposure. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 410 412 453

Aspiration hazard

| Product/ingredient name | Result |
|--|------------|
| naphtha (petroleum), full-range alkylate | Category 1 |

Conclusion/Summary : May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material. Data available.

Information on likely routes of exposure : Not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

No known endocrine disrupting properties that affect human health

11.2.2 Other information

Contains : HYDROGEN SULPHIDE: Chronic health effects due to repeated exposures to low levels of H2S have not been established. High level (700 ppm) acute exposure can result in sudden death. High concentrations will lead to cardiopulmonary arrest due to nervous system toxicity and pulmonary edema. Lower levels (150 ppm) may overwhelm sense of smell, eliminating warning of exposure. Symptoms of overexposure to H2S include headache, fatigue, insomnia, irritability, and gastrointestinal problems. Repeated exposures to approximately 25 ppm will irritate mucous membranes and the respiratory system and have been implicated in some eye damage. NAPHTHALENE: Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain. N-HEXANE: Prolonged and/or repeated exposures to n-Hexane can cause progressive and potentially irreversible damage to the peripheral nervous system (e.g. fingers, feet, arms, legs, etc.). Simultaneous exposure to Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) and n-Hexane can potentiate the risk of adverse effects from n-Hexane on the peripheral nervous system. n-Hexane has been shown to cause testicular damage at high doses in male rats. The relevance of this effect for humans is unknown. TOLUENE : Concentrated, prolonged or deliberate inhalation may cause brain and nervous system damage. Prolonged and repeated exposure of pregnant animals (> 1500 ppm) have been reported to cause adverse fetal developmental effects.

Product : High vapour concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Exposure to this material, or one of its components, in situations where there is the potential for high levels, such as in confined spaces or with abuse, may result in abnormal heart rhythm (arrhythmia). High-level exposure to hydrocarbons (above occupational exposure limits) may initiate arrhythmia in a worker that is undergoing stress or is taking a heart-stimulating substance such as epinephrine, a nasal decongestant, or an asthma or cardiovascular drug. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

| |
|------------------|
| ALKYLATE MGBLEND |
|------------------|

Section 12. Ecological information

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

12.1 Toxicity

| Product/ingredient name | Duration | Species | Result |
|--|----------|--|---|
| naphtha (petroleum), full-range alkylate | 72 hours | Algae - <i>Pseudokirchneriella subcapitata</i> | Acute EL50 1 to 1000 mg/l data for similar materials |
| | 48 hours | daphnia - <i>Daphnia magna</i> | Acute EL50 1 to 100 mg/l data for similar materials |
| | 96 hours | Fish - <i>Fish</i> | Acute LL50 1 to 100 mg/l data for similar materials |
| | 72 hours | Algae - <i>Pseudokirchneriella subcapitata</i> | Chronic NOEL 1 to 100 mg/l data for similar materials |
| | 21 days | daphnia - <i>Daphnia magna</i> | Chronic NOEL 1 to 10 mg/l data for similar materials |

Conclusion/Summary

- Acute toxicity : Toxic to aquatic life.
- Chronic toxicity : Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Qualifier | Media |
|--|------------------------|-----------------|----------------------------|-------|
| naphtha (petroleum), full-range alkylate | Ready Biodegradability | <60 % - 28 days | data for similar materials | water |

- Biodegradability : Material -- Expected to be inherently biodegradable
- Atmospheric Oxidation : Majority of components -- Expected to degrade rapidly in air

12.3 Bioaccumulative potential

- Conclusion/Summary : Majority of components -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

12.4 Mobility in soil

- Mobility : High molecular wt. component -- Low potential to migrate through soil. Low molecular wt. component -- Moderate potential to migrate through soil. Majority of components -- Highly volatile, will partition rapidly to air. Moderate potential to migrate through soil. Not expected to partition to sediment and wastewater solids.

12.5 Results of PBT and vPvB assessment

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|--|-----|-----|-----|-----|------|-----|-----|
| naphtha (petroleum), full-range alkylate | N/A | N/A | N/A | Yes | N/A | N/A | N/A |

12.6 Endocrine disrupting properties

No known endocrine disrupting properties that affect the environment

12.7 Other adverse effects

- Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

European waste catalogue (EWC)

| Waste code | Waste designation |
|------------|--------------------------------|
| 05 01 99 | wastes not otherwise specified |


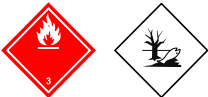
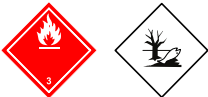

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|---------------------------------|---|---|--|---|
| 14.1 UN number or ID number | UN1268 | UN1268 | UN1268 | UN1268 |
| 14.2 UN proper shipping name | PETROLEUM DISTILLATES, N.O.S. | PETROLEUM DISTILLATES, N.O.S. | PETROLEUM DISTILLATES, N.O.S. | Petroleum distillates, n.o.s. |
| 14.3 Transport hazard class(es) | 3 | 3 | 3 | 3 |
| Label(s) / Mark(s) |  |  |  |  |
| 14.4 Packing group | I | I | I | I |
| 14.5 Environmental hazards | Yes. | Yes. | Yes. | Yes. The environmentally hazardous substance mark is not required. |

ALKYLATE MGBLEND

SECTION 14: Transport information

| | |
|--|---|
| <u>Additional information</u> | |
| ADR/RID | : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Hazard identification number</u> 33 <u>Limited quantity</u> 500 ml <u>Special provisions</u> 664 <u>Tunnel code</u> (D/E) |
| ADN | : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. N2 |
| IMDG | : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency schedules</u> F-E, S-E Flash point ≤0 °C C.C. |
| IATA | : The environmentally hazardous substance mark may appear if required by other transportation regulations. <u>Quantity limitation</u> Passenger and Cargo Aircraft: 1 L. Packaging instructions: 351. Cargo Aircraft Only: 30 L. Packaging instructions: 361. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden. <u>Special provisions</u> A3 |
| 14.6 Special precautions for user | : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. |
| 14.7 Maritime transport in bulk according to IMO instruments | : Not applicable. |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : 48, 72, 3
on the manufacture,
placing on the market
and use of certain
dangerous substances,
mixtures and articles

Other EU regulations

Explosive precursors : Not applicable.

Seveso Directive

This product is controlled under the Seveso Directive.

Named substances

| Name |
|--|
| Petroleum products and alternative fuels (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams) (d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d) |

Danger criteria

ALKYLATE MGBLEND

SECTION 15: Regulatory information

Category

P5a
E2

National regulations

| Product/ingredient name | List name | Name on list | Classification | Notes |
|-------------------------|------------------------------|---|----------------|-------|
| naphthalene | Belgium Carcinogen chemicals | polyzyklische aromatische Kohlenwasserstoffen | Carc. | - |

Inventory list

| | |
|--|--|
| Australia inventory (AIC) | : All components are listed or exempted. |
| Canada inventory (DSL-NDSL) | : All components are listed or exempted. |
| China inventory (IECSC) | : Not determined. |
| Japan inventory (CSCL) | : Not determined. |
| Japan inventory (Industrial Safety and Health Act) | : Not determined. |
| New Zealand Inventory of Chemicals (NZIoC) | : Not determined. |
| Philippines inventory (PICCS) | : All components are listed or exempted. |
| Korea inventory (KECI) | : All components are listed or exempted. |
| Taiwan Chemical Substances Inventory (TCSI) | : All components are listed or exempted. |
| United States inventory (TSCA 8b) | : All components are active or exempted. |

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|-------------------------|-----------------|
| Flam. Liq. 1, H224 | Expert judgment |
| Skin Irrit. 2, H315 | Expert judgment |
| Carc. 2, H351 | Expert judgment |
| Repr. 2, H361fd | Expert judgment |
| STOT SE 3, H336 | Expert judgment |
| Asp. Tox. 1, H304 | Expert judgment |
| Aquatic Chronic 2, H411 | Expert judgment |

Full text of abbreviated H statements

ALKYLATE MGBLEND

SECTION 16: Other information

| | |
|--------|--|
| H224 | Extremely flammable liquid and vapour. |
| H225 | Highly flammable liquid and vapour. |
| H228 | Flammable solid. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |
| H361d | Suspected of damaging the unborn child. |
| H361f | Suspected of damaging fertility. |
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

Full text of classifications [CLP/GHS]

| | |
|-------------------|---|
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Acute 1 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 1 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| Carc. 2 | CARCINOGENICITY - Category 2 |
| Flam. Liq. 1 | FLAMMABLE LIQUIDS - Category 1 |
| Flam. Liq. 2 | FLAMMABLE LIQUIDS - Category 2 |
| Flam. Sol. 2 | FLAMMABLE SOLIDS - Category 2 |
| Repr. 2 | REPRODUCTIVE TOXICITY - Category 2 |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |

Date of issue/ Date of revision : 24 June 2024

Date of previous issue : No previous edition

Version : 1

Product code : 1149431

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Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use in coatings - Professional

List of use descriptors : **Identified use name:** Use in coatings - Professional
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC15, PROC19
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d

Environmental contributing scenarios : **General measures applicable to all activities** - ERC08a, ERC08d

Health Contributing scenarios : **General measures applicable to all activities** - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC15, PROC19
General exposures (closed systems) - PROC02
Filling/preparation of equipment from drums or containers. - PROC02
Film formation - air drying - PROC04
Mixing operations - PROC03
Mixing operations (open systems) - PROC05
Drum/batch transfers - PROC08a
Material transfers - PROC08b
Roller, spreader, flow application - PROC10
Roller, spreader, flow application - PROC10
Spraying or fogging - PROC11
Dipping, immersion and pouring - PROC13
Laboratory activities - PROC15
Hand application - fingerpaints, pastels, adhesives - PROC19
Storage - PROC15

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General measures applicable to all activities

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 0.077 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0005
Maximum daily site tonnage (kg/day): 0.21 kg/day
Regional use tonnage (tonnes/year): 150 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year) : 365 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

| | |
|--|--|
| Other conditions affecting environmental exposure | : Release fraction to air from wide dispersive use (regional only): 0.98 Release fraction to soil from wide dispersive use (regional only): 0.01 Release fraction to wastewater from wide dispersive use: 0.01 |
| Technical conditions and measures at process level (source) to prevent release | : Common practices vary across sites thus conservative process release estimates used. |
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of: 0 % Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of: Not applicable. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of : 81.8 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 0.91 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

| ALKYLATE MGBLEND | | Use in coatings - Professional |
|--|--|---------------------------------------|
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 3: General exposures (closed systems) | | |
| Use in contained systems | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. | |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 4: Filling/preparation of equipment from drums or containers. | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. | |
| Technical conditions and measures at process level (source) to prevent release | : Use drum pumps or carefully pour from container. | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 5: Film formation - air drying | | |
| Indoor and outdoor use. | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. | |
| Ventilation control measures | : Provide extract ventilation to points where emissions occur. (Outdoor use) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Date of issue/Date of revision : 4/1/2022 | | 21/116 |

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 6: Mixing operations

Closed systems / Preparation of material for application

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 7: Mixing operations (open systems)

Preparation of material for application / Pouring from small containers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 8: Drum/batch transfers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Ensure material transfers are under containment or extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 9: Material transfers

Drum/batch transfers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Ensure material transfers are under containment or extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 10: Roller, spreader, flow application

Outdoor

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Avoid carrying out operation for more than 4 hours.

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Technical conditions and measures at process level (source) to prevent release : Ensure operation is undertaken outdoors.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 11: Roller, spreader, flow application

Indoor

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Provide enhanced general ventilation by mechanical means.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 12: Spraying or fogging

Manual application / Manual spraying / Indoor and outdoor use.

Product characteristics : Spray

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Carry out in a vented booth or extracted enclosure.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Respiratory protection : Wear a respirator conforming to EN140 with type A filter or better.

Contributing scenario controlling worker exposure for 13: Dipping, immersion and pouring

Indoor and outdoor use.

Product characteristics : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. (Indoor use)**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 14: Laboratory activities****Product characteristics** : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Handle in a fume cupboard or under extract ventilation.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 15: Hand application - fingerpaints, pastels, adhesives**

Indoor and outdoor use.

Product characteristics : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Provide enhanced general ventilation by mechanical means. (Indoor use)**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Respiratory protection** : Wear a respirator conforming to EN140 with type A filter or better. (Outdoor use)**Contributing scenario controlling worker exposure for 16: Storage****Product characteristics** : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Conditions and measures related to personal protection, hygiene and health evaluation**

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: General measures applicable to all activities

Exposure assessment (environment): : Hydrocarbon Block Method (Petrorisk)

Exposure estimation and reference to its source : ESVOC SPERC 8.3b.v1

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Filling/preparation of equipment from drums or containers.

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Film formation - air drying

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 6: Mixing operations

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Mixing operations (open systems)

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Drum/batch transfers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Material transfers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: Roller, spreader, flow application

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 11: Roller, spreader, flow application

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 12: Spraying or fogging

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 13: Dipping, immersion and pouring

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 14: Laboratory activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 15: Hand application - fingerpaints, pastels, adhesives

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 16: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use in cleaning agents - Professional

List of use descriptors : **Identified use name:** Use in cleaning agents - Professional
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC10, PROC11
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d

Environmental contributing scenarios : **General exposures** - ERC08a, ERC08d

Health Contributing scenarios : **General measures applicable to all activities** - PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC10, PROC11
Automated process with (semi) closed systems - PROC02
Use in contained batch processes - PROC04
Filling/preparation of equipment from drums or containers. - PROC03, PROC08a
Semi-automated process. (e.g. Semi-automatic application of floor care and maintenance products) - PROC04
Bulk transfers - PROC08b
Cleaning with low-pressure washers - PROC10
Cleaning with high-pressure washers - PROC11
Cleaning surfaces by wiping or brushing. - PROC10
Storage - PROC01

Processes and activities covered by the exposure scenario : Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 0.34 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0005
Maximum daily site tonnage (kg/day): 0.94 kg/day
Regional use tonnage (tonnes/year): 690 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 365 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.02
Release fraction to soil from wide dispersive use (regional only): 0
Release fraction to wastewater from wide dispersive use: 0.000001

| | |
|--|---|
| Technical conditions and measures at process level (source) to prevent release | : Common practices vary across sites thus conservative process release estimates used. |
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of: 0 Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of: Not applicable. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 81.8 |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 4.1 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

Product characteristics : Liquid

| | |
|--|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 3: Automated process with (semi) closed systems

Use in contained systems

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Provide extract ventilation to points where emissions occur. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 4: Use in contained batch processes

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 5: Filling/preparation of equipment from drums or containers.

Indoor and outdoor use.

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 6: Semi-automated process. (e.g. Semi-automatic application of floor care and maintenance products)

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 7: Bulk transfers

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 8: Cleaning with low-pressure washers

| | |
|--|---|
| No spraying | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Technical conditions and measures at process level (source) to prevent release | : Minimise exposure by extracted full enclosure for the operation or equipment. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 9: Cleaning with high-pressure washers

| | |
|---|--|
| Spraying / Indoor | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |

| | |
|--|--|
| Ventilation control measures | : Provide enhanced general ventilation by mechanical means. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 10: Cleaning surfaces by wiping or brushing.

| | |
|--|--|
| Manual application | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Provide enhanced general ventilation by mechanical means. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 11: Storage

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

| | |
|-----------------|-------------------|
| Website: | : Not applicable. |
|-----------------|-------------------|

Exposure estimation and reference to its source - Environment: 1: General exposures

| | |
|--|--------------------------------------|
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 8.4b.v1 |

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 3: Automated process with (semi) closed systems

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 4: Use in contained batch processes

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Filling/preparation of equipment from drums or containers.

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 6: Semi-automated process. (e.g. Semi-automatic application of floor care and maintenance products)

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Bulk transfers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Cleaning with low-pressure washers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Cleaning with high-pressure washers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: Cleaning surfaces by wiping or brushing.

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Storage

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

| | |
|--------|---|
| Health | : Available hazard data do not enable the derivation of a DNEL for carcinogenic effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |
|--------|---|

Additional good practice advice beyond the REACH CSA

| | |
|-------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use in cleaning agents - Industrial

List of use descriptors : **Identified use name:** Use in cleaning agents - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC10, PROC13
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04

Environmental contributing scenarios : **General exposures - ERC04**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC10, PROC13**
Automated process with (semi) closed systems - PROC02
Use in contained batch processes - PROC04
Filling/preparation of equipment from drums or containers. - PROC03
Cleaning with high-pressure washers - PROC07
Equipment cleaning and maintenance - PROC08a
Bulk transfers - PROC08b
Dipping, immersion and pouring - PROC13
Cleaning with low-pressure washers - PROC08b
Surface cleaning - PROC10
Storage - PROC01

Processes and activities covered by the exposure scenario : Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/day): 100 tonnes/day
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.00024
Maximum daily site tonnage (kg/day): 5 000 kg/day
Regional use tonnage (tonnes/year): 410 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 20 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 1
Release fraction to soil from process (initial release prior to RMM): 0
Release fraction to wastewater from process (initial release prior to RMM): 0.00003

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|---|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0 % Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of 70 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 82 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 21 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance.
Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems Avoid all possible sources of ignition (spark or flame). Avoid all possible sources of ignition (spark or flame). Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

| | |
|---|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |

| | |
|--|--|
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 3: Automated process with (semi) closed systems

Use in contained systems

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 4: Use in contained batch processes

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 5: Filling/preparation of equipment from drums or containers.

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 6: Cleaning with high-pressure washers

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 7: Equipment cleaning and maintenance

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 8: Bulk transfers

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 9: Dipping, immersion and pouring

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Technical conditions and measures at process level (source) to prevent release | : Minimise exposure by extracted full enclosure for the operation or equipment. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 10: Cleaning with low-pressure washers**Product characteristics** : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Provide enhanced general ventilation by mechanical means.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 11: Surface cleaning**

Manual application / No spraying

Product characteristics : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Provide enhanced general ventilation by mechanical means.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 12: Storage****Product characteristics** : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Section 3 - Exposure estimation and reference to its source****Website:** : Not applicable.**Exposure estimation and reference to its source - Environment: 1: General exposures****Exposure assessment (environment):** : Hydrocarbon Block Method (Petrisk)**Exposure estimation and reference to its source** : ESVOC SPERC 4.4a.v1

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: Automated process with (semi) closed systems

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Use in contained batch processes

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Filling/preparation of equipment from drums or containers.

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 6: Cleaning with high-pressure washers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Equipment cleaning and maintenance

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Bulk transfers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Dipping, immersion and pouring

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: Cleaning with low-pressure washers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Surface cleaning

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 12: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Formulation and (re)packing of substances and mixtures

List of use descriptors : **Identified use name:** Formulation and (re)packing of substances and mixtures
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Environmental contributing scenarios : **General exposures - ERC02**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15**
General exposures (closed systems) - PROC01, PROC02, PROC03
General exposures (open systems) - PROC04
Process sampling - PROC03
Mixing operations - PROC05
Laboratory activities - PROC15
Bulk transfers - PROC08b
Transfer from/pouring from containers - PROC08a
Drum/batch transfers - PROC08b
Drum and small package filling - PROC09
Equipment cleaning and maintenance - PROC08a
Storage - PROC02

Processes and activities covered by the exposure scenario : Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 30 000 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0022
Maximum daily site tonnage (kg/day): 100 000 kg/day
Regional use tonnage (tonnes/year): 14 000 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 300 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements): 0.025
Release fraction to soil from process (initial release prior to RMM): 0.0001
Release fraction to wastewater from process (initial release prior to RMM): 0.002

| | |
|--|--|
| Technical conditions and measures at process level (source) to prevent release | : Common practices vary across sites thus conservative process release estimates used. |
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 68 % Risk from environmental exposure is driven by freshwater sediment. Treat air emission to provide a typical removal efficiency of 0 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 98.7 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 100 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 98.7 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle substance within a closed system. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |

| ALKYLATE MGBLEND | | Formulation and (re)packing of substances and mixtures |
|--|---|--|
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 3: General exposures (closed systems) | | |
| With sample collection | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 4: General exposures (open systems) | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : | Provide extract ventilation to points where emissions occur. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 5: Process sampling | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 6: Mixing operations | | |
| Closed systems | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Date of issue/Date of revision : 1/30/2022 | | |

| ALKYLATE MGBLEND | | Formulation and (re)packing of substances and mixtures |
|---|--|---|
| Other conditions affecting workers exposure | | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | | : Provide extract ventilation to points where emissions occur. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 7: Laboratory activities | | |
| Product characteristics | | : Liquid |
| Concentration of substance in mixture or article | | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | | : Handle in a fume cupboard or under extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 8: Bulk transfers | | |
| Product characteristics | | : Liquid |
| Concentration of substance in mixture or article | | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 9: Transfer from/pouring from containers | | |
| Manual application | | |
| Product characteristics | | : Liquid |
| Concentration of substance in mixture or article | | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 10: Drum/batch transfers

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 11: Drum and small package filling

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Fill containers/cans at dedicated fill points supplied with local extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 12: Equipment cleaning and maintenance

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 13: Storage

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

| | |
|--|---|
| Website: | : Not applicable. |
| Exposure estimation and reference to its source - Environment: 1: General exposures | |
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrorisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 2.2.v1 |
| Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems) | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 4: General exposures (open systems) | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 5: Process sampling | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 6: Mixing operations | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 7: Laboratory activities | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 8: Bulk transfers | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 9: Transfer from/pouring from containers | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Drum/batch transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 11: Drum and small package filling

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 12: Equipment cleaning and maintenance

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 13: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use in coatings - Industrial

List of use descriptors : **Identified use name:** Use in coatings - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC15
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04

Environmental contributing scenarios : **General exposures - ERC04**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC15**
General exposures (closed systems) - PROC02, PROC03
Film formation - force drying, stoving and other technologies - PROC02
Film formation - air drying - PROC04
Preparation of material for application - PROC05
Spraying or fogging - PROC07
Spraying (automatic/robotic) - PROC07
Material transfers - PROC08b
Roller, spreader, flow application - PROC10
Dipping, immersion and pouring - PROC13
Laboratory activities - PROC15
Equipment cleaning and maintenance - PROC08a
Storage - PROC01

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 15 000 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.072
Maximum daily site tonnage (kg/day): 50 000 kg/day
Regional use tonnage (tonnes/year): 210 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 300

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.98
Release fraction to soil from process (initial release prior to RMM): 0
Release fraction to wastewater from process (initial release prior to RMM): 0.007

| | |
|--|---|
| Technical conditions and measures at process level (source) to prevent release | : Common practices vary across sites thus conservative process release estimates used. |
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of $\geq 81.7\%$ Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of 90% Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of $\geq 99.2\%$ |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m^3/day): 2 000 m^3/day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 50 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 99.2 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested EN374) if hand contact with substance likely. Clean up contamination/ spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimize exposures and to report any skin problems that may develop.

Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

Product characteristics : Liquid

| | |
|--|--|
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

With sample collection

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Provide extract ventilation to points where emissions occur. (With sample collection) |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 4: Film formation - force drying, stoving and other technologies

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Provide extract ventilation to points where emissions occur. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 5: Film formation - air drying

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 6: Preparation of material for application

Mixing operations (Closed systems)

Product characteristics : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Provide extract ventilation to points where emissions occur.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 7: Spraying or fogging**

Manual application

Product characteristics : Spray**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 8: Spraying (automatic/robotic)****Product characteristics** : Spray**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.**Ventilation control measures** : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.**Conditions and measures related to personal protection, hygiene and health evaluation****Advice on general occupational hygiene** : Assumes a good basic standard of occupational hygiene is implemented**Contributing scenario controlling worker exposure for 9: Material transfers****Product characteristics** : Liquid**Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100 %.**Frequency and duration of use/exposure** : Covers daily exposures up to 8 hours (unless stated differently)**Other conditions affecting workers exposure** : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Ensure material transfers are under containment or extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 10: Roller, spreader, flow application

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 11: Dipping, immersion and pouring

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Use ventilation to extract vapours from freshly coated articles/objects and surfaces.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 12: Laboratory activities

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Ventilation control measures : Handle in a fume cupboard or under extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 13: Equipment cleaning and maintenance

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 14: Storage

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: General exposures

| | |
|--|--------------------------------------|
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 4.3a.v1 |

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 4: Film formation - force drying, stoving and other technologies

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 5: Film formation - air drying

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 6: Preparation of material for application

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Spraying or fogging

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Spraying (automatic/robotic)

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Material transfers

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: Roller, spreader, flow application

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Dipping, immersion and pouring

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 12: Laboratory activities

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 13: Equipment cleaning and maintenance

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 14: Storage

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|-------------|---|
| Environment | <p>: Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.</p> <p>Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.</p> <p>Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.</p> |
| Health | <p>: Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.</p> <p>Available hazard data do not support the need for a DNEL to be established for other health effects.</p> <p>Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.</p> <p>Risk management measures are based on qualitative risk characterisation.</p> <p>Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.</p> |

Additional good practice advice beyond the REACH CSA

| | |
|-------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Distribution of substance

List of use descriptors : **Identified use name:** Distribution of substance
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15
Sector of end use: SU03, SU08, SU09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05, ERC06a, ERC06b, ERC06c, ERC06d, ERC07

Environmental contributing scenarios : **General exposures** - ERC04, ERC05, ERC06a, ERC06b, ERC06c, ERC06d, ERC07

Health Contributing scenarios : **General measures applicable to all activities** - PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC15
General exposures (closed systems) - PROC01, PROC02, PROC03
General exposures (open systems) - PROC04
Process sampling - PROC03
Laboratory activities - PROC15
Bulk closed loading and unloading - PROC08b
Drum and small package filling - PROC09
Equipment cleaning and maintenance - PROC08a
Storage - PROC02
Bulk closed loading - PROC08b

Processes and activities covered by the exposure scenario : Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its sampling, storage, unloading distribution and associated laboratory activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 51 000 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.002
Maximum daily site tonnage (kg/day): 170 000 kg/day
Regional use tonnage (tonnes/year): 25 000 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 300 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.001
Release fraction to soil from process (initial release prior to RMM): 0.00001
Release fraction to wastewater from process (initial release prior to RMM): 0.00001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|--|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0 % Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of 90 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 83.3 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 670 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |

| ALKYLATE MGBLEND | | Distribution of substance |
|--|---|--|
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 3: General exposures (closed systems) | | |
| With sample collection | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 4: General exposures (open systems) | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : | Provide extract ventilation to points where emissions occur. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 5: Process sampling | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 6: Laboratory activities | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : | Handle in a fume cupboard or under extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Date of issue/Date of revision : 1/30/2022 | | 59/116 |

| ALKYLATE MGBLEND | | Distribution of substance |
|--|---|--|
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 7: Bulk closed loading and unloading | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 8: Drum and small package filling | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : | Fill containers/cans at dedicated fill points supplied with local extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 9: Equipment cleaning and maintenance | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 10: Storage | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : | Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : | Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : | Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 11: Bulk closed loading

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: General exposures

| | |
|--|--------------------------------------|
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrisk) |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 4: General exposures (open systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 5: Process sampling

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 6: Laboratory activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 7: Bulk closed loading and unloading

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 8: Drum and small package filling

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Equipment cleaning and maintenance

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: Storage

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Bulk closed loading

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | <p>: Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.</p> <p>Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.</p> <p>Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.</p> |
| Health | <p>: Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.</p> <p>Available hazard data do not support the need for a DNEL to be established for other health effects.</p> <p>Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.</p> <p>Risk management measures are based on qualitative risk characterisation.</p> <p>Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.</p> |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use in rubber production and processing

List of use descriptors : **Identified use name:** Use in rubber production and processing
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC06, PROC07, PROC08a, PROC08b, PROC09, PROC13, PROC14, PROC15, PROC21
Sector of end use: SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC06d

Environmental contributing scenarios : **General exposures** - ERC04, ERC06d

Health Contributing scenarios : **General measures applicable to all activities** - PROC01, PROC02, PROC03, PROC04, PROC05, PROC06, PROC07, PROC08a, PROC08b, PROC09, PROC13, PROC14, PROC15, PROC21
General exposures (closed systems) - PROC01, PROC03
Material transfers - PROC08b
Bulk weighing - PROC02
Small scale weighing - PROC09
Additive premixing - PROC04, PROC05
Calendering (including Banburys) - PROC06
Pressing uncured rubber blanks - PROC14
Tyre build-up - PROC07
Vulcanisation - PROC06
Cooling cured articles - PROC06
Production of articles by dipping and pouring - PROC13
Finishing operations - PROC21
Laboratory activities - PROC15
Equipment maintenance - PROC08a
Storage - PROC02

Processes and activities covered by the exposure scenario : Manufacture of tyres and general rubber articles, including processing of raw (uncured) rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 680 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 1
Maximum daily site tonnage (kg/day): 34 000 kg/day
Regional use tonnage (tonnes/year): 680 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 20 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

| | |
|--|--|
| Other conditions affecting environmental exposure | : Release fraction to air from process (initial release prior to RMM): 0.01 Release fraction to soil from process (initial release prior to RMM): 0.0001 Release fraction to wastewater from process (initial release prior to RMM): 0.003 |
| Technical conditions and measures at process level (source) to prevent release | : Common practices vary across sites thus conservative process release estimates used. |
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of: ≥ 37.1 % Risk from environmental exposure is driven by freshwater sediment. Treat air emission to provide a typical removal efficiency of: 0 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of: 97.4 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m^3/day): 2 000 m^3/day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe)[Assumed domestic sewage treatment plant flow] (kg/day): 34 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 97.4 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained batch processes. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

With sample collection

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 4: Material transfers

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 5: Bulk weighing

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 6: Small scale weighing

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Carry out in a vented booth or extracted enclosure. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 7: Additive premixing

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 8: Calendering (including Banburys)

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 9: Pressing uncured rubber blanks

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Provide extract ventilation to points where emissions occur. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |

| | |
|--|---|
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 10: Tyre build-up | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 11: Vulcanisation | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Provide adequate ventilation. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 12: Cooling cured articles | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |
| Contributing scenario controlling worker exposure for 13: Production of articles by dipping and pouring | |
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Ventilation control measures | : Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. |
| Date of issue/Date of revision | : 1/30/2022 |

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 14: Finishing operations

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 15: Laboratory activities

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Ventilation control measures : Handle in a fume cupboard or under extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 16: Equipment maintenance

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 17: Storage

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Section 3 - Exposure estimation and reference to its source

| | |
|--|---|
| Website: | : Not applicable. |
| Exposure estimation and reference to its source - Environment: 1: General exposures | |
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrorisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 4.19.v1 |
| Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems) | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 4: Material transfers | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 5: Bulk weighing | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 6: Small scale weighing | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 7: Additive premixing | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 8: Calendering (including Banburys) | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 9: Pressing uncured rubber blanks | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Tyre build-up

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Vulcanisation

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 12: Cooling cured articles

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 13: Production of articles by dipping and pouring

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 14: Finishing operations

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 15: Laboratory activities

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 16: Equipment maintenance

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 17: Storage

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.

Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.

| | |
|--------|--|
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |
|--------|--|

Additional good practice advice beyond the REACH CSA

| | |
|-------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Manufacture of substance

List of use descriptors : **Identified use name:** Manufacture of substance
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Sector of end use: SU03, SU08, SU09, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01

Environmental contributing scenarios : **General exposures - ERC01**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15**
General exposures (closed systems) - PROC01, PROC02, PROC03
General exposures (open systems) - PROC04
Mixing operations - PROC04
Process sampling - PROC03
Laboratory activities - PROC15
Bulk transfers - PROC08b
Drum/batch transfers - PROC08b
Equipment maintenance - PROC08a
Storage - PROC02

Processes and activities covered by the exposure scenario : Manufacture of the substance or use as an intermediate, process chemical or extracting agent. Includes recycling/ recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 600 000 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.027
Maximum daily site tonnage (kg/day): 2 000 000 kg/day
Regional use tonnage (tonnes/year): 22 000 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 300 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.05
Release fraction to soil from process (initial release prior to RMM): 0.0001
Release fraction to wastewater from process (initial release prior to RMM): 0.003

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|---|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 94.7 % Risk from environmental exposure is driven by freshwater sediment. Treat air emission to provide a typical removal efficiency of 90 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 99.8 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 10 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 2 000 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 99.8 % |
| Conditions and measures related to external treatment of waste for disposal | : During manufacturing, no waste of the substance is generated. |
| Conditions and measures related to external recovery of waste | : During manufacturing, no waste of the substance is generated. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained batch processes. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

With sample collection

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 4: General exposures (open systems)

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 5: Mixing operations

Closed systems

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 6: Process sampling

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

| ALKYLATE MGBLEND | | Manufacture of substance |
|---|---|--------------------------|
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 7: Laboratory activities | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Ventilation control measures | : Handle in a fume cupboard or under extract ventilation. | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 8: Bulk transfers | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 9: Drum/batch transfers | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 10: Equipment maintenance | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |

Contributing scenario controlling worker exposure for 11: Storage

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: General exposures

| | |
|--|--------------------------------------|
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrisk) |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 4: General exposures (open systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 5: Mixing operations

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 6: Process sampling

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 7: Laboratory activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 8: Bulk transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 9: Drum/batch transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Equipment maintenance

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 11: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | <p>: Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.</p> <p>If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.</p> <p>Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination.</p> <p>Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination.</p> <p>Scaled local assessments for EU refineries have been performed using site-specific data and are attached in PETRORISK file - "Site-Specific Production" worksheet.</p> |
| Health | <p>: Available hazard data do not enable the derivation of a DNEL for dermal irritant effects.</p> <p>Available hazard data do not support the need for a DNEL to be established for other health effects.</p> <p>Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented.</p> <p>Risk management measures are based on qualitative risk characterisation.</p> <p>Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.</p> |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use as an intermediate

List of use descriptors : **Identified use name:** Use as an intermediate
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Sector of end use: SU03, SU08, SU09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC06a

Environmental contributing scenarios : **General exposures - ERC06a**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15**
General exposures (closed systems) - PROC01, PROC02, PROC03
General exposures (open systems) - PROC04
Process sampling - PROC03
Laboratory activities - PROC15
Equipment maintenance - PROC08a
Storage - PROC02
Mixing operations - PROC04
Bulk transfers - PROC08b
Drum/batch transfers - PROC08b

Processes and activities covered by the exposure scenario : Use of substance as an intermediate (not related to Strictly Controlled Conditions). Includes recycling/recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/rail car and bulk container).

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 15 000 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0013
Maximum daily site tonnage (kg/day): 50 000 kg/day
Regional use tonnage (tonnes/year): 11 000 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 300 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.025
Release fraction to soil from process (initial release prior to RMM): 0.001
Release fraction to wastewater from process (initial release prior to RMM): 0.003

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|---|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of $\geq 57.4\%$ Risk from environmental exposure is driven by freshwater sediment. Treat air emission to provide a typical removal efficiency of 80% Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of $\geq 98.2\%$ |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m^3/day): $2\,000\text{ m}^3/\text{day}$ Estimated substance removal from wastewater via municipal sewage treatment: 95.8% Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): $50\,000\text{ kg}/\text{day}$ Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 98.2% |
| Conditions and measures related to external treatment of waste for disposal | : This substance is consumed during use and no waste from the substance is generated. |
| Conditions and measures related to external recovery of waste | : This substance is consumed during use and no waste from the substance is generated. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained batch processes. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100% . |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature ($> 20^\circ\text{C}$ above ambient temperature) |

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

With sample collection

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 4: General exposures (open systems)

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 5: Process sampling

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 6: Laboratory activities

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Organisational measures to prevent/limit releases, dispersion and exposure : Handle in a fume cupboard or under extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 7: Equipment maintenance

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 8: Storage

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 9: Mixing operations

Closed systems

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 10: Bulk transfers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Ventilation control measures : Ensure material transfers are under containment or extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 11: Drum/batch transfers

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: General exposures

| | |
|--|--------------------------------------|
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 6.1a.v1 |

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 4: General exposures (open systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 5: Process sampling

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 6: Laboratory activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 7: Equipment maintenance

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 8: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 9: Mixing operations

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Bulk transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 11: Drum/batch transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use as a fuel - Industrial

List of use descriptors : **Identified use name:** Use as a fuel - Industrial
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC07

Environmental contributing scenarios : **General exposures - ERC07**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16**
General exposures (closed systems) - PROC01, PROC02, PROC03
Bulk closed unloading - PROC08b
Drum/batch transfers - PROC08b
Refuelling - PROC08b
Refuelling aircraft - PROC08b
Use as a fuel - PROC16
Equipment maintenance - PROC08a
Storage - PROC02

Processes and activities covered by the exposure scenario : Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 1 500 000 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.89
Maximum daily site tonnage (kg/day): 5 000 000 kg/day
Regional use tonnage (tonnes/year): 1 700 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 300 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.005
Release fraction to soil from process (initial release prior to RMM): 0
Release fraction to wastewater from process (initial release prior to RMM): 0.00001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|--|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0 % Risk from environmental exposure is driven by humans via indirect exposure (primarily inhalation). Treat air emission to provide a typical removal efficiency of 95 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 94.6 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 5 000 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | : Combustion emissions considered in regional exposure assessment. Combustion emissions limited by required exhaust emission controls. External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : This substance is consumed during use and no waste from the substance is generated. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 4: Bulk closed unloading

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 5: Drum/batch transfers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 6: Refuelling

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 7: Refuelling aircraft

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Ventilation control measures | : Ensure material transfers are under containment or extract ventilation. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 8: Use as a fuel

Closed systems

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 9: Equipment maintenance

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 10: Storage

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

| | |
|--|---|
| Website: : Not applicable. | |
| Exposure estimation and reference to its source - Environment: 1: General exposures | |
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrorisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 7.12a.v1 |
| Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems) | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 4: Bulk closed unloading | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 5: Drum/batch transfers | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 6: Refuelling | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 7: Refuelling aircraft | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 8: Use as a fuel | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 9: Equipment maintenance | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use as a fuel - Professional

List of use descriptors : **Identified use name:** Use as a fuel - Professional
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b

Environmental contributing scenarios : **General exposures** - ERC09a, ERC09b

Health Contributing scenarios : **General measures applicable to all activities** - PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
General exposures (closed systems) - PROC01, PROC02
Preparation of material for application - PROC03
Bulk closed unloading - PROC08b
Drum/batch transfers - PROC08b
Refuelling - PROC08b
Use as a fuel - PROC16
Equipment maintenance - PROC08a
Storage - PROC02

Processes and activities covered by the exposure scenario : Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 590 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0005
Maximum daily site tonnage (kg/day): 1 600 kg/day
Regional use tonnage (tonnes/year): 1 200 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 365 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.01
Release fraction to soil from process (initial release prior to RMM): 0.00001
Release fraction to wastewater from process (initial release prior to RMM): 0.00001

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|---|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | <ul style="list-style-type: none"> If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0 % Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of: Not applicable. Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 81.8 % |
| Organisational measures to prevent/limit release from site | <ul style="list-style-type: none"> Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | <ul style="list-style-type: none"> Assumed domestic sewage treatment plant flow (m³/day): 2 000 m³/day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 7 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | <ul style="list-style-type: none"> Combustion emissions considered in regional exposure assessment. Combustion emissions limited by required exhaust emission controls. External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | <ul style="list-style-type: none"> This substance is consumed during use and no waste from the substance is generated. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 4: Preparation of material for application

Mixing operations / Closed systems

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 5: Bulk closed unloading

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 6: Drum/batch transfers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Assumes use at not more than 20°C above ambient temperature.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 7: Refuelling

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 8: Use as a fuel

Closed systems

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Contributing scenario controlling worker exposure for 9: Equipment maintenance

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Technical conditions and measures at process level (source) to prevent release | : Drain down system prior to equipment break-in or maintenance. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |
| Personal protection | : Wear chemical-resistant gloves (tested to EN374) in combination with intensive management supervision controls. |

Contributing scenario controlling worker exposure for 10: Storage

| | |
|--|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Assumes use at not more than 20°C above ambient temperature. |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

| | |
|--|---|
| Website: | : Not applicable. |
| Exposure estimation and reference to its source - Environment: 1: General exposures | |
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrorisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 9.12b.v1 |
| Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems) | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 4: Preparation of material for application | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 5: Bulk closed unloading | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 6: Drum/batch transfers | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 7: Refuelling | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 8: Use as a fuel | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |
| Exposure estimation and reference to its source - Workers: 9: Equipment maintenance | |
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Manufacture of other substances

List of use descriptors : **Identified use name:** Manufacture of other substances
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Sector of end use: SU03, SU08, SU09, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC01

Environmental contributing scenarios : **General exposures - ERC01**

Health Contributing scenarios : **General measures applicable to all activities - PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15**
General exposures (closed systems) - PROC01, PROC02, PROC03
General exposures (open systems) - PROC04
Mixing operations - PROC04
Process sampling - PROC03
Laboratory activities - PROC15
Bulk transfers - PROC08b
Drum/batch transfers - PROC08b
Equipment cleaning and maintenance - PROC08a
Storage - PROC02

Processes and activities covered by the exposure scenario : Manufacture of other substances: use as process chemical or extraction agent. Includes recycling/ recovery, material transfers, storage, sampling, associated laboratory activities, maintenance and loading (including marine vessel/barge, road/ rail car and bulk container).

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 330 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 1
Maximum daily site tonnage (kg/day): 16 000 kg/day
Regional use tonnage (tonnes/year): 330

Frequency and duration of use : Continuous release
Emission days (days per year): 20 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.01
Release fraction to soil from process (initial release prior to RMM): 0.0001
Release fraction to wastewater from process (initial release prior to RMM): 0.003

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

| | |
|--|---|
| Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil | : If discharging to municipal sewage treatment plant, no on-site wastewater treatment required. If discharging to municipal sewage treatment plant, provide the required on-site wastewater removal efficiency of 0 % Risk from environmental exposure is driven by freshwater. Treat air emission to provide a typical removal efficiency of 80 % Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 88.1 % |
| Organisational measures to prevent/limit release from site | : Do not apply industrial sludge to natural soils. Prevent discharge of undissolved substance to or recover from onsite wastewater. Sewage sludge should be incinerated, contained or reclaimed. |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 46 000 kg/day Total efficiency of removal from wastewater after on-site and off-site (municipal treatment plant) RMMs: 95.8 % |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling worker exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting.

General measures (flammability)

Risks from the physicochemical hazards of substances, such as flammability or explosiveness can be controlled by implementing risk management measures at the workplace. It is recommended to follow the Dangerous Substances and Explosion Atmospheres Regulations (DSEAR) and The Equipment and Protective Systems Intended for use in Potentially Explosive Atmosphere Regulations (EPS). Based on the implementation of a selection of handling and storage risk management measures for the identified uses, the risk can be regarded as controlled to an acceptable level.

Use in contained systems. Avoid all possible sources of ignition (spark or flame). - No smoking. Handle in well ventilated area to prevent formation of explosive atmosphere. Use equipment and protective systems approved for flammable substances. Restrict line velocity during pumping to avoid generation of electrostatic discharge. Ground/bond container and receiving equipment. Use non-sparking tools. Refer to relevant technical standards / EU regulations / national regulations. Review SDS for additional advice..

General measures (skin irritants)

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop.

| | |
|---|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 3: General exposures (closed systems)

With sample collection

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 4: General exposures (open systems)

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 5: Mixing operations

Closed systems

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Assumes a good basic standard of occupational hygiene is implemented

Contributing scenario controlling worker exposure for 6: Process sampling

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100 %.

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature)

Conditions and measures related to personal protection, hygiene and health evaluation

| ALKYLATE MGBLEND | | Manufacture of other substances |
|--|---|---------------------------------|
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 7: Laboratory activities | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Ventilation control measures | : Handle in a fume cupboard or under extract ventilation. | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 8: Bulk transfers | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 9: Drum/batch transfers | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |
| Contributing scenario controlling worker exposure for 10: Equipment cleaning and maintenance | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. | |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) | |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) | |
| Conditions and measures related to personal protection, hygiene and health evaluation | | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented | |

Contributing scenario controlling worker exposure for 11: Storage

| | |
|--|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers percentage substance in the product up to 100 %. |
| Frequency and duration of use/exposure | : Covers daily exposures up to 8 hours (unless stated differently) |
| Other conditions affecting workers exposure | : Operation is carried out at elevated temperature (> 20°C above ambient temperature) |
| Conditions and measures related to personal protection, hygiene and health evaluation | |
| Advice on general occupational hygiene | : Assumes a good basic standard of occupational hygiene is implemented |

Section 3 - Exposure estimation and reference to its source

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1: General exposures

| | |
|--|--|
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrorisk) |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 2: General measures applicable to all activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 4: General exposures (open systems)

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 5: Mixing operations

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 6: Process sampling

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 7: Laboratory activities

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 8: Bulk transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 9: Drum/batch transfers

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 10: Equipment cleaning and maintenance

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Exposure estimation and reference to its source - Workers: 11: Storage

| | |
|--|---|
| Exposure assessment (human): | : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. |
| Exposure estimation and reference to its source | : Not available. |

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|--|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. |
| Health | : Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Risk management measures are based on qualitative risk characterisation. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use in cleaning agents - Consumer

List of use descriptors : **Identified use name:** Use in cleaning agents - Consumer
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d
Market sector by type of chemical product: PC03, PC04, PC09a, PC24, PC35, PC38

Environmental contributing scenarios : **General exposures** - ERC08a, ERC08d

Health Contributing scenarios : **General measures applicable to all activities** - PC03, PC04, PC09a, PC24, PC35, PC38
Air care, instant action (aerosol sprays) - PC03
Air care, continuous action (solid and liquid) - PC03
Washing car window - PC04
Pouring into radiator - PC04
Lock de-icer - PC04
Water-borne latex wall paint - PC09a
Solvent-rich, high-solid, water-borne paint - PC09a
Aerosol spray can - PC09a
Removers (paint-, glue-, wall paper-, sealant-remover) - PC09a
Liquids - PC24
Pastes - PC24
Sprays - PC24
Laundry and dish-washing products - PC35
Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) - PC35
Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) - PC35
Welding and soldering products, flux products - PC38

Processes and activities covered by the exposure scenario : Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air-care products.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 16 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0005
Maximum daily site tonnage (kg/day): 44 kg/day
Regional use tonnage (tonnes/year): 32 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 365 days per year

| | |
|--|--|
| Environment factors not influenced by risk management | : Local freshwater dilution factor: 10 Local marine water dilution factor: 100 |
| Other conditions affecting environmental exposure | : Release fraction to air from wide dispersive use (regional only): 0.95 Release fraction to soil from wide dispersive use (regional only): 0.025 Release fraction to wastewater from wide dispersive use: 0.025 |
| Conditions and measures related to sewage treatment plant | : Assumed domestic sewage treatment plant flow (m ³ /day): 2 000 m ³ /day Estimated substance removal from wastewater via municipal sewage treatment: 95.8 % Not applicable as there is no release to wastewater. Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 180 kg/day |
| Conditions and measures related to external treatment of waste for disposal | : External treatment and disposal of waste should comply with applicable local and/or national regulations. |
| Conditions and measures related to external recovery of waste | : External recovery and recycling of waste should comply with applicable local and/or national regulations. |

Contributing scenario controlling consumer exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting. Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage. Keep lamps filled with this liquid out of the reach of children.

General measures (flammability)

Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For flammable substances a selection of the following measures need to be implemented to control unintended ignition of flammable substances. These measures are expected to be suitable to prevent minor accidents which might occur during consumer use. Based on the implementation of a selection of handling and storage risk management measures for the identified uses, it is anticipated that there is no immediate concern as the risk should be controlled to an acceptable level.

Use only with adequate ventilation. Avoid all possible sources of ignition (spark or flame). - No smoking. Review SDS for additional advice..

| | |
|---|-------------------|
| Product characteristics | : Liquid |
| Frequency and duration of use/exposure | : Not applicable. |
| Other given operational conditions affecting consumers exposure | : Not applicable. |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 3: Air care, instant action (aerosol sprays)

| | |
|---|--|
| Product characteristics | : Spray |
| Concentration of substance in mixture or article | : Covers concentrations up to 50 % |
| Amounts used | : For each use event, covers use amounts up to (g): 0.1 g Covers use in room size of (m ³): 20 m ³ Covers skin contact area up to (cm ²): 857.5 cm ² |
| Frequency and duration of use/exposure | : Covers use up to 4 times per day Covers use up to 365 days per year Covers exposure up to 0.25 hour(s) Covers use under typical household ventilation. |

Other given operational conditions affecting consumers exposure : No exposure assessment presented for human health.
Covers use at ambient temperatures.
Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 4: Air care, continuous action (solid and liquid)

Product characteristics : Solid and Liquid

Concentration of substance in mixture or article : Covers concentrations up to 10 %

Amounts used : Covers skin contact area up to (cm²): 37.5 cm²
For each use event, covers use amounts up to (g): 0.48 g
Covers use in room size of (m³): 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 365 days per year
Covers daily exposures up to 8 hours
Covers use under typical household ventilation.

Other given operational conditions affecting consumers exposure : Covers use at ambient temperatures.
Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 5: Washing car window

Anti-freeze and de-icing products

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 1 %

Amounts used : Covers skin contact area up to (cm²): 857.5 cm²
For each use event, covers use amounts up to (g): 0.5 g
Covers use in room size of (m³): 34 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 365 days per year
Covers exposure up to 0.02 hour(s)
Covers use in a one car garage (34 m³) under typical ventilation.

Other given operational conditions affecting consumers exposure : Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure
Covers use at ambient temperatures.

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 6: Pouring into radiator

Anti-freeze and de-icing products

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 10 %

Amounts used : Covers skin contact area up to (cm²): 428 cm²
For each use event, covers use amounts up to (g): 2 000 g
Covers use in room size of (m³): 34 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 365 days per year
Covers exposure up to 0.17 hour(s)
Covers use in a one car garage (34 m³) under typical ventilation.

Other given operational conditions affecting consumers exposure : Covers use at ambient temperatures.
Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 7: Lock de-icer

Anti-freeze and de-icing products

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 30 %

Amounts used : Covers skin contact area up to (cm²): 214.4 cm²
For each use event, covers use amounts up to (g): 4 g
Covers use in room size of (m³): 34 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 365 days per year
Covers exposure up to 0.25 hour(s)
Covers use in a one car garage (34 m³) under typical ventilation. 1.5 ach (air changes per hour)

Other given operational conditions affecting consumers exposure : Covers use at ambient temperatures.
Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 8: Water-borne latex wall paint

Coatings and paints, thinners, paint removers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 1.5 %

Amounts used : Covers skin contact area up to (cm²): 428.75 cm²
For each use event, covers use amounts up to (g): 2760 g
Covers use in room size of (m³): 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 4 days per year
Covers exposure up to 2.2 hour(s)
Covers use under typical household ventilation.

Other given operational conditions affecting consumers exposure : Covers use at ambient temperatures.
Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 9: Solvent-rich, high-solid, water-borne paint

Coatings and paints, thinners, paint removers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 8 %

Amounts used : Covers skin contact area up to (cm²): 428.75 cm²
For each use event, covers use amounts up to (g): 744 g
Covers use in room size of (m³): 20 m³

| | |
|---|--|
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 6 days per year Covers exposure up to 2.2 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 10: Aerosol spray can

Coatings and paints, thinners, paint removers

| | |
|---|--|
| Product characteristics | : Spray |
| Concentration of substance in mixture or article | : Covers concentrations up to 10 % |
| Amounts used | : Covers skin contact area up to (cm ²): 857.5 cm ² For each use event, covers use amounts up to (g): 215 g Covers use in room size of (m ³): 34 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 2 days per year Covers exposure up to 0.33 hour(s) Covers use in a one car garage (34 m ³) under typical ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 11: Removers (paint-, glue-, wall paper-, sealant-remover)

Coatings and paints, thinners, paint removers

| | |
|---|--|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers concentrations up to 5 % |
| Amounts used | : Covers skin contact area up to (cm ²): 857.5 cm ² For each use event, covers use amounts up to (g): 491 g Covers use in room size of (m ³): 20 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 3 days per year Covers exposure up to 2 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 12: Liquids

Lubricants, greases, release products

| | |
|---|------------------------------------|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers concentrations up to 20 % |

| | |
|---|--|
| Amounts used | : Covers skin contact area up to (cm ²): 468 cm ² For each use event, covers use amounts up to (g): 2 200 g Covers use in room size of (m ³): 34 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 4 days per year Covers exposure up to 0.17 hour(s) Covers use in a one car garage (34 m ³) under typical ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 13: Pastes

Lubricants, greases, release products

| | |
|---|---|
| Product characteristics | : Pastes |
| Concentration of substance in mixture or article | : Covers concentrations up to 20 % |
| Amounts used | : Covers skin contact area up to (cm ²): 468 cm ² For each use event, covers use amounts up to (g): 34 g Covers use in room size of (m ³): 20 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 10 days per year Covers exposure up to 8 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 14: Sprays

Lubricants, greases, release products

| | |
|---|--|
| Product characteristics | : Spray |
| Concentration of substance in mixture or article | : Covers concentrations up to 15 % |
| Amounts used | : Covers skin contact area up to (cm ²): 428.75 cm ² For each use event, covers use amounts up to (g): 73 g Covers use in room size of (m ³): 20 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 6 days per year Covers exposure up to 0.17 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 15: Laundry and dish-washing products

Washing and cleaning products

| | |
|---|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers concentrations up to 5 % |
| Amounts used | : Covers skin contact area up to (cm ²): 857.5 cm ² For each use event, covers use amounts up to (g): 15 g Covers use in room size of (m ³): 20 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 365 days per year Covers exposure up to 0.5 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Not applicable. |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 16: Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)

Washing and cleaning products

| | |
|---|---|
| Product characteristics | : Liquid |
| Concentration of substance in mixture or article | : Covers concentrations up to 5 % |
| Amounts used | : Covers skin contact area up to (cm ²): 857.5 cm ² For each use event, covers use amounts up to (g): 27 g Covers use in room size of (m ³): 20 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 128 days per year Covers exposure up to 0.33 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |
| Advice on general occupational hygiene | : Not applicable. |

Contributing scenario controlling consumer exposure for 17: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Washing and cleaning products

| | |
|---|---|
| Product characteristics | : Spray |
| Concentration of substance in mixture or article | : Covers concentrations up to 15 % |
| Amounts used | : Covers skin contact area up to (cm ²): 428 cm ² For each use event, covers use amounts up to (g): 35 g Covers use in room size of (m ³): 20 m ³ |
| Frequency and duration of use/exposure | : Covers use up to 1 times per day Covers use up to 128 days per year Covers exposure up to 0.17 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | |

| | | |
|--|---|--|
| ALKYLATE MGBLEND | | <i>Use in cleaning agents - Consumer</i> |
| Advice on general occupational hygiene | : | Not applicable. |
| Contributing scenario controlling consumer exposure for 18: Welding and soldering products, flux products | | |
| Product characteristics | : | Liquid |
| Concentration of substance in mixture or article | : | Covers concentrations up to 20 % |
| Amounts used | : | For each use event, covers use amounts up to (g): 12 g Covers use in room size of (m³): 20 m³ Covers skin contact area up to (cm²): 857.5 cm² |
| Frequency and duration of use/exposure | : | Covers use up to 1 times per day Covers use up to 365 days per year Covers exposure up to 1 hour(s) Covers use under typical household ventilation. |
| Other given operational conditions affecting consumers exposure | : | Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure |
| Conditions and measures related to personal protection and hygiene | | |
| Advice on general occupational hygiene | : | Not applicable. |

Section 3 - Exposure estimation and reference to its source

| | | |
|---|---|--------------------------------------|
| Website: | : | Not applicable. |
| Exposure estimation and reference to its source - Environment: 1: General exposures | | |
| Exposure assessment (environment): | : | Hydrocarbon Block Method (Petrorisk) |
| Exposure estimation and reference to its source | : | Not applicable. |
| Exposure estimation and reference to its source - Consumers: 2: General measures applicable to all activities | | |
| Exposure assessment (human): | : | ECETOC TRA, consumer |
| Exposure estimation and reference to its source | : | Not applicable. |
| Exposure estimation and reference to its source - Consumers: 3: Air care, instant action (aerosol sprays) | | |
| Exposure assessment (human): | : | ECETOC TRA, consumer |
| Exposure estimation and reference to its source | : | Not applicable. |
| Exposure estimation and reference to its source - Consumers: 4: Air care, continuous action (solid and liquid) | | |
| Exposure assessment (human): | : | ECETOC TRA, consumer |
| Exposure estimation and reference to its source | : | Not applicable. |
| Exposure estimation and reference to its source - Consumers: 5: Washing car window | | |
| Exposure assessment (human): | : | ECETOC TRA, consumer |
| Exposure estimation and reference to its source | : | Not applicable. |
| Exposure estimation and reference to its source - Consumers: 6: Pouring into radiator | | |
| Exposure assessment (human): | : | ECETOC TRA, consumer |
| Exposure estimation and reference to its source | : | Not applicable. |

Exposure estimation and reference to its source - Consumers: 7: Lock de-icer

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 8: Water-borne latex wall paint

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 9: Solvent-rich, high-solid, water-borne paint

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 10: Aerosol spray can

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 11: Removers (paint-, glue-, wall paper-, sealant-remover)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 12: Liquids

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 13: Pastes

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 14: Sprays

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 15: Laundry and dish-washing products

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 16: Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 17: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Exposure estimation and reference to its source - Consumers: 18: Welding and soldering products, flux products

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not applicable.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

| | |
|--------------------|---|
| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. |
| Health | : Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

| | |
|--------------------|------------------|
| Environment | : Not available. |
| Health | : Not available. |

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB
Code : 1149431
Product name : ALKYLATE MGBLEND

Section 1 - Title

Short title of the exposure scenario : Use as a fuel - Consumer

List of use descriptors : **Identified use name:** Use as a fuel - Consumer
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b
Market sector by type of chemical product: PC13

Environmental contributing scenarios : **General exposures** - ERC09a, ERC09b

Health Contributing scenarios : **General measures applicable to all activities** - PC13
Liquid: automotive refuelling - PC13
Liquid: Scooter refuelling - PC13
Liquid: garden equipment - use - PC13
Liquid: garden equipment - refuelling - PC13

Processes and activities covered by the exposure scenario : Covers consumer uses in liquid fuels.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Predominantly hydrophobic
Substance is complex UVCB.

Amounts used : Annual site tonnage (tonnes/year): 4 600 tonnes/year
Fraction of EU tonnage used in region: 0.1
Fraction of Regional tonnage used locally: 0.0005
Maximum daily site tonnage (kg/day): 12 000 kg/day
Regional use tonnage (tonnes/year): 9 100 000 tonnes/year

Frequency and duration of use : Continuous release
Emission days (days per year): 365 days per year

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only): 0.01
Release fraction to soil from wide dispersive use (regional only): 0.00001
Release fraction to wastewater from wide dispersive use: 0.00001

Conditions and measures related to sewage treatment plant : Assumed domestic sewage treatment plant flow: 2 000 m³/day
Estimated substance removal from wastewater via municipal sewage treatment: 95.8 %
Not applicable as there is no release to wastewater.
Maximum allowable site tonnage (MSafe) [Assumed domestic sewage treatment plant flow] (kg/day): 54 000 kg/day

Conditions and measures related to external treatment of waste for disposal : Combustion emissions considered in regional exposure assessment.
Combustion emissions limited by required exhaust emission controls.
External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : This substance is consumed during use and no waste from the substance is generated.

Contributing scenario controlling consumer exposure for 2: General measures applicable to all activities

General measures (aspiration)

The H304 risk phrase (May be fatal if swallowed and enters airways) relates to potential for aspiration, a non-quantifiable hazard determined by physico-chemical properties (i.e. viscosity) that can occur during ingestion and also if it is vomited following ingestion. A DNEL cannot be derived. Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For substances classified as H304, the following measures need to be implemented to control the aspiration hazard.

Product safety-related measures: Do not ingest. If swallowed then seek immediate medical assistance. Do not induce vomiting. Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage. Keep lamps filled with this liquid out of the reach of children.

General measures (flammability)

Risks from the physicochemical hazards of substances can be controlled by implementing risk management measures. For flammable substances a selection of the following measures need to be implemented to control unintended ignition of flammable substances. These measures are expected to be suitable to prevent minor accidents which might occur during consumer use. Based on the implementation of a selection of handling and storage risk management measures for the identified uses, it is anticipated that there is no immediate concern as the risk should be controlled to an acceptable level.

Use only with adequate ventilation. Avoid all possible sources of ignition (spark or flame). - No smoking. Review SDS for additional advice..

Product characteristics : Liquid

Frequency and duration of use/exposure : Not applicable.

Other given operational conditions affecting consumers exposure : Not applicable.

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 3: Liquid: automotive refuelling

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 100 %

Amounts used : Covers skin contact area up to (cm²): 210 cm²
For each use event, covers use amounts up to (g): 37 500 g
Covers use in room size of (m³): 100 m³

Frequency and duration of use/exposure : Covers use up to: 1 times per day
Covers use up to: 52 days per year
Covers outdoor use.
Covers exposure up to: 0.05 hour(s)

Other given operational conditions affecting consumers exposure : Covers use at ambient temperatures.
Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure
No exposure assessment presented for human health.

Conditions and measures related to personal protection and hygiene

Advice on general occupational hygiene : Not applicable.

Contributing scenario controlling consumer exposure for 4: Liquid: Scooter refuelling

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 100 %

Amounts used : Covers skin contact area up to (cm²): 210 cm²
For each use event, covers use amounts up to (g): 3 750 g
Covers use in room size of (m³): 100 m³

| ALKYLATE MGBLEND | | Use as a fuel - Consumer |
|--|---|--------------------------|
| Frequency and duration of use/exposure | : Covers use up to: 1 times per day Covers use up to: 52 days per year Covers outdoor use. Covers exposure up to: 0.03 hour(s) | |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure | |
| Conditions and measures related to personal protection and hygiene | | |
| Advice on general occupational hygiene | : Not applicable. | |
| Contributing scenario controlling consumer exposure for 5: Liquid: garden equipment - use | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers concentrations up to: 100 % | |
| Amounts used | : For each use event, covers use amounts up to (g): 750 g Covers use in room size of (m³): 100 m³ Covers skin contact area up to (cm²): 420 cm² | |
| Frequency and duration of use/exposure | : Covers use up to: 1 times per day Covers use up to: 26 days per year Covers exposure up to: 2 hour(s) Covers outdoor use. | |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure | |
| Conditions and measures related to personal protection and hygiene | | |
| Advice on general occupational hygiene | : Not applicable. | |
| Contributing scenario controlling consumer exposure for 6: Liquid: garden equipment - refuelling | | |
| Product characteristics | : Liquid | |
| Concentration of substance in mixture or article | : Covers concentrations up to: 100 % | |
| Amounts used | : Covers skin contact area up to (cm²): 420 cm² For each use event, covers use amounts up to (g): 750 g Covers use in room size of (m³): 34 m³ | |
| Frequency and duration of use/exposure | : Covers use up to: 1 times per day Covers use up to: 26 days per year Covers use in a one car garage (34 m³) under typical ventilation. Covers exposure up to: 0.03 hour(s) | |
| Other given operational conditions affecting consumers exposure | : Covers use at ambient temperatures. Liquid, vapour pressure > 10 kPa at Standard Temperature and Pressure | |
| Conditions and measures related to personal protection and hygiene | | |
| Advice on general occupational hygiene | : Not applicable. | |

Section 3 - Exposure estimation and reference to its source

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|--|--------------------------------------|
| Website: | : Not applicable. |
| Exposure estimation and reference to its source - Environment: 1: General exposures | |
| Exposure assessment (environment): | : Hydrocarbon Block Method (Petrisk) |
| Exposure estimation and reference to its source | : ESVOC SPERC 9.12c.v1 |

Exposure estimation and reference to its source - Consumers: 2: General measures applicable to all activities

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Consumers: 3: Liquid: automotive refuelling

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Consumers: 4: Liquid: Scooter refuelling

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Consumers: 5: Liquid: garden equipment - use

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Consumers: 6: Liquid: garden equipment - refuelling

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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| Environment | : Further details on scaling and control technologies are provided in SPERC factsheet. Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. |
| Health | : Predicted exposures are not expected to exceed the applicable consumer reference values when the operational conditions/risk management measures given in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. |

Additional good practice advice beyond the REACH CSA

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| Environment | : Not available. |
| Health | : Not available. |

ALKYLATE MGBLEND