

SAFETY DATA SHEET



EXXONMOBIL™ DIPE

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

1.1 Product identifier

Product name : EXXONMOBIL™ DIPE

EC number : 203-560-6

REACH Registration number

Registration number

01-2119548382-38-0001

CAS number : 108-20-3

Product description : Ether

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

Intended Use : Fuel additive, Solvent

Identified uses

Manufacture of substance
Distribution of substance
Formulation and (re)packing of substances and mixtures
Use in coatings - Industrial
Use as a fuel - Industrial
Functional fluids - Industrial
Use in laboratories - Industrial
Use in mining chemicals - Industrial
Use in coatings - Professional
Use as a fuel - Professional
Functional fluids - Professional
Use in laboratories - Professional
Use in coatings - Consumer
Use as a fuel - Consumer
Functional fluids - Consumer

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 2 239 3111

e-mail address of person responsible for this SDS : SDS-CC@exxonmobil.com

SDS Internet Address : www.sds.exxonmobil.com

1.4 Emergency telephone number

National advisory body/ : -

Poison Centre

24 Hour Emergency Telephone : +48 22 398 80 29 / +1-703-527-3887 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mono-constituent substance

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

Flam. Liq. 2, H225

STOT SE 3, H336

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 : H225 - Highly flammable liquid and vapour.
H336 - May cause drowsiness or dizziness.

Precautionary statements

Prevention : 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.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Response : 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.
P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

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 : diisopropyl ether

Supplemental label elements : EUH019 - May form explosive peroxides.
EUH066 - Repeated exposure may cause skin dryness or cracking.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : 3, 40

2.3 Other hazards

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SECTION 2: Hazards identification

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

PBT	P	B	T	vPvB	vP	vB
No	N/A	N/A	No	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 : Mono-constituent substance

Product/ingredient name	Identifiers	% by weight	Classification	Specific Conc. Limits, M-factors and ATEs	Type
diisopropyl ether	REACH #: 01-2119548382-38 EC: 203-560-6 CAS: 108-20-3	99	Flam. Liq. 2, H225 STOT SE 3, H336 EUH019 EUH066 See Section 16 for the full text of the H statements declared above.	-	[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.

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 if irritation occurs.
- 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. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe.

SECTION 4: First aid measures

- Ingestion** : 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. 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.

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
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- 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** : Highly 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.
- Hazardous combustion products** : Incomplete combustion products, Oxides of carbon, Smoke, Fume

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).

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. Do not confine in area of spill. Allow liquid to evaporate from the surface. Seek the advice of a specialist before using dispersants. Advise occupants and shipping in downwind areas of fire and explosion hazard and warn them to stay clear. 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.

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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. 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.
- 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 (100×10^{-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.
- Loading/Unloading Temperature** : Ambient
- Transport Temperature** : Ambient
- Transport Pressure** : Ambient

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

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

Storage Temperature : Ambient

Storage Pressure : Ambient

Suitable Containers/ Packing : Tank Cars, Tank Trucks, Drums, Pipelines, Railcars

Suitable Materials and Coatings : Carbon Steel, butyl rubber, CAF Joints

Unsuitable Materials and Coatings : Natural Rubber

SECTION 7: Handling and storage

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
diisopropyl ether	<p>Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021).</p> <p>TWA: 1000 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 1/2022).</p> <p>TWA: 250 ppm 8 hours.</p> <p>TWA: 1040 mg/m³ 8 hours.</p> <p>STEL: 310 ppm 15 minutes.</p> <p>STEL: 1300 mg/m³ 15 minutes.</p>

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

No DNELs/DMELs available.

PNECs

No PNECs available

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.

SECTION 8: Exposure controls/personal protection

- 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. 4 - 8 hours (breakthrough time): Polyethylene (HPPE laminated film), minimum 0.07 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.
European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.
- 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 and safety characteristics

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. [Clear]
- Colour** : Colourless
- Odour** : Sharp
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : 68°C (154.4°F) [Technical literature]
- Flash point** : Closed cup: -28°C (-18.4°F) [Calculated]
- Evaporation rate** : 13 (butyl acetate = 1) [Calculated]
- Flammability** : Flammable liquids - Category 2

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Section 9. Physical and chemical properties and safety characteristics

Lower and upper explosion limit	: Lower: 1.4% [Extrapolated] Upper: 8%
Vapour pressure	: 120.01 mm Hg [20 °C] [Calculated]
Relative vapour density	: 3.5 [Air = 1] [Calculated]
Relative density	: 0.72 [Calculated]
Density	: 0.72 g/cm³ [15°C (59°F)] [ASTM D4052]
Solubility in water	: Moderate
Partition coefficient: n-octanol/ water	: <4
Auto-ignition temperature	: 443°C (829.4°F) [Extrapolated]
Decomposition temperature	: Not available.
Viscosity	: 0.44 cSt [20 °C]
Molecular weight	: 102
Particle characteristics	
Median particle size	: Not applicable.

9.2 Other information

Hygroscopic	: No
Coefficient of Thermal Expansion	: 0.00103 per Deg C

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.
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,amines, Strong oxidisers, acids, Chlorinated Compounds, Aldehydes, Air, Caustics, Alkanolamines
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
diisopropyl ether	LCLo Inhalation Vapour	Rabbit	>64 mg/l	1 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	4600 mg/kg	-
diisopropyl ether	LD50 Oral	Rat	4600 mg/kg	-

Conclusion/Summary

SECTION 11: Toxicological information

- Inhalation** : Minimally Toxic. Data available. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
- Dermal** : Minimally Toxic. Data available. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 402
- Oral** : Minimally Toxic. Data available. Based on test data for the material. 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)
diisopropyl ether	2500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Conclusion/Summary

- Skin** : May dry the skin leading to discomfort and dermatitis. Mildly irritating to skin with prolonged exposure. Data available. Based on test data for the material. 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 the material. Test(s) equivalent or similar to OECD Guideline 405
- Respiratory** : Negligible hazard at ambient/normal handling temperatures. No end point data for material.

Sensitisation

Conclusion/Summary

- Skin** : Not expected to be a skin sensitizer. Data available. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 429
- 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 the material. Test(s) equivalent or similar to OECD Guideline 471 473 476 480

Carcinogenicity

- Conclusion/Summary** : Not expected to cause cancer. Data available. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 451

Reproductive toxicity

- Conclusion/Summary** : Not expected to be a reproductive toxicant. Data available. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 414

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 the material. Test(s) equivalent or similar to OECD Guideline 413

Aspiration hazard

- Conclusion/Summary** : Not expected to be an aspiration hazard. Based on physico-chemical properties of the material. No end point data for material.

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

SECTION 11: Toxicological information

- Contains** : Diisopropyl ether (DIPE) : Inhalation exposure of animals to DIPE produced decreased motor activity, maternal toxicity, and toxicity to the fetus of laboratory animals.
- Product** : Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.

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
diisopropyl ether	96 hours	Algae - Pseudokirchneriella subcapitata	Acute EC50 >1000 mg/l
	96 hours	Fish - Pimephales promelas	Acute EC50 786 mg/l
	48 hours	daphnia - Daphnia magna	Acute EC50 190 mg/l

Conclusion/Summary

- Acute toxicity** : Not expected to be harmful to aquatic organisms.
- Chronic toxicity** : Not expected to demonstrate chronic toxicity to aquatic organisms

12.2 Persistence and degradability

- Photolysis** : 0.221 day Calculated (s)
- Hydrolysis** : Material -- Transformation due to hydrolysis not expected to be significant.
- Photolysis** : Material -- Transformation due to photolysis not expected to be significant.
- Atmospheric Oxidation** : Material -- Expected to degrade rapidly in air

12.3 Bioaccumulative potential

- Conclusion/Summary : Material -- Potential to bioaccumulate is low.

12.4 Mobility in soil

- Mobility** : Material -- Highly volatile, will partition rapidly to air. 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
diisopropyl ether	No	N/A	N/A	No	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 : The classification of the product may meet the criteria for a hazardous waste.





The European Waste Catalogue (EWC) code is specific to the waste generating process and waste constituents. Determine the EWC according to the criteria provided in the European Waste Catalogue and the hazardous waste list established by Commission Decision 2000/532/EC, as amended.

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	UN1159	UN1159	UN1159	UN1159
14.2 UN proper shipping name	(diisopropyl ether)	(diisopropyl ether)	(diisopropyl ether)	(diisopropyl ether)
14.3 Transport hazard class(es)	3	3	3	3
Label(s) / Mark(s)				
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	No.	No.	No.

Flash point -28 °C C.C.

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.

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SECTION 14: Transport information

14.7 Maritime transport in bulk according to IMO instruments	Proper shipping name	: ISOPROPYL ETHER
	Remarks	: Liquid bulk cargoes: Ship type: 3 Pollution category: Y

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 : 3, 40
on the manufacture,
placing on the market
and use of certain
dangerous substances,
mixtures and articles

Other EU regulations

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c

National regulations

Inventory list

Australia inventory (AIC)	: All components are listed or exempted.
Canada inventory (DSL-NDSL)	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Japan inventory (CSCL)	: All components are listed or exempted.
Japan inventory (Industrial Safety and Health Act)	: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
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.
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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. 2, H225 STOT SE 3, H336	On basis of test data Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Flam. Liq. 2 STOT SE 3	FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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Version : 1

Product code : 1161092_13528078

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Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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, ERC04

Environmental contributing scenarios : **General exposures** - ERC01, ERC04

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 - PROC08b
Laboratory activities - PROC15
Bulk transfers - PROC08b
Bulk transfers (closed systems) - PROC08b
Equipment cleaning and maintenance - PROC08a
Storage - PROC01, 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 : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 1 000 tonnes/year
Average local daily tonnage(kg/day): 50 000 kg/day
Fraction of EU tonnage used in region: 1

Frequency and duration of use : Continuous release
Emission days (days per year): 350 days per year

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
Soil emission controls are not applicable as there is no direct release to soil.
Volatile compounds subject to air emission controls.

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.
Conditions and measures related to sewage treatment plant	: Maximum allowable site tonnage (MSafe): [Assumed domestic sewage treatment plant flow]: 2 868 kg/day
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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..

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: 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.
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.
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

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.
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 (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.
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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.
Technical conditions and measures at process level (source) to prevent release	: Drain down and flush 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

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.
Technical conditions and measures at process level (source) to prevent release	: Store substance within a closed system.
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.
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Exposure estimation and reference to its source - Environment: 1: General exposures

- Exposure assessment (environment):** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
ECETOC TRA environment
- 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: Bulk transfers (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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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: ERC01, ERC02, ERC03, ERC04, ERC05, ERC06a, ERC06b, ERC06c, ERC06d, ERC07

Environmental contributing scenarios : **General exposures** - ERC01, ERC02, ERC03, 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 transfers - PROC08b
Bulk transfers (closed systems) - PROC08b
Drum and small package filling - PROC09
Equipment cleaning and maintenance - PROC08a
Storage - PROC01, PROC02

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 : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 1 000 tonnes/year
 Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
 Soil emission controls are not applicable as there is no direct release to soil.
 Volatile compounds subject to air emission controls.

Organisational measures to prevent/limit release from site	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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..

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)
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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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)
Conditions and measures related to personal protection, hygiene and health evaluation	

EXXONMOBIL™ DIPE		Distribution of substance
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)	
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)	
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		
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)	
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 (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)	
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.	
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 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)	
Date of issue/Date of revision : 12/8/2022		

23/110

EXXONMOBIL™ DIPE		Distribution of substance
Ventilation control measures	:	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
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)
Technical conditions and measures at process level (source) to prevent release	:	Drain down and flush 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
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)
Technical conditions and measures at process level (source) to prevent release	:	Store substance within a closed system.
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):	:	Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
Exposure estimation and reference to its source	:	ESVOC SPERC 1.1b.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	:	Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
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	:	Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: Bulk transfers (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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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
Batch processes at elevated temperatures - PROC03
Process sampling - PROC03
Laboratory activities - PROC15
Bulk transfers - PROC08b
Mixing operations (open systems) - PROC05
Transfer from/pouring from containers - PROC08a
Drum/batch transfers - PROC08b
Production of preparation or articles by tableting, compression, extrusion or pelletisation - PROC14
Drum and small package filling - PROC09
Equipment cleaning and maintenance - PROC08a
Storage - PROC01, 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 : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 1 000 tonnes/year
 Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required Soil emission controls are not applicable as there is no direct release to soil. Volatile compounds subject to air emission controls.
Organisational measures to prevent/limit release from site	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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)
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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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)
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: Batch processes at elevated temperatures

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)
Technical conditions and measures at process level (source) to prevent release	: Formulate in enclosed or ventilated mixing vessels.
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)
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)
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)
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 (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)

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: Transfer from/pouring from containers

Manual

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 activities involving exposure for more than 4 hours

Ventilation control measures : Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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)

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 12: Production of preparation or articles by tableting, compression, extrusion or pelletisation

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)

Ventilation control measures : Handle substance within a predominantly closed system provided with 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: 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)
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 14: 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)
Technical conditions and measures at process level (source) to prevent release	: Drain down and flush 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

Contributing scenario controlling worker exposure for 15: 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)
Technical conditions and measures at process level (source) to prevent release	: Store substance within a closed system.
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.
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Exposure estimation and reference to its source - Environment: 1: General exposures

Exposure assessment (environment):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 5: Batch processes at elevated temperatures

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 10: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 12: Production of preparation or articles by tableting, compression, extrusion or pelletisation

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 13: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 14: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 15: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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) - PROC01, PROC02
Film formation - force drying, stoving and other technologies - PROC02
Mixing operations (closed systems) - PROC03
Film formation - air drying - PROC04
Preparation of material for application - PROC05
Spraying (automatic/robotic) - PROC07
Manual spraying - PROC07
Material transfers - PROC08a, 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 : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 100 tonnes/year
Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required Soil emission controls are not applicable as there is no direct release to soil. Volatile compounds subject to air emission controls.
Organisational measures to prevent/limit release from site	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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..

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)
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 / 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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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	: Operation is carried out at elevated temperature (> 20°C above ambient temperature)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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)

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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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: 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)
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: Preparation of material for application

Mixing operations (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)
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: 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)
Technical conditions and measures at process level (source) to prevent release	: Carry out in a vented booth provided with laminar airflow.
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: Manual spraying

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)
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 10: Material transfers

Dedicated facility / Non-dedicated facility	
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)
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 11: 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)
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 12: 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)
Ventilation control measures	: Provide extract ventilation to points where emissions occur.
Organisational measures to prevent/limit releases, dispersion and exposure	: Avoid manual contact with wet work pieces.
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: 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)
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: 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)
Technical conditions and measures at process level (source) to prevent release	: Drain down and flush 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

Contributing scenario controlling worker exposure for 15: 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)
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):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
Exposure estimation and reference to its source	: ESVOC SPERC 4.3a.v1 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 5: Mixing operations (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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 6: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 7: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: Manual spraying

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 10: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 12: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 13: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 14: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 15: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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**
Bulk transfers - PROC08b
Drum/batch transfers - PROC08b
General exposures (closed systems) - PROC01, PROC02, PROC03
Use as a fuel - PROC03, PROC16
Equipment cleaning and maintenance - PROC08a
Storage - PROC01, 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 : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 200 tonnes/year
Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
Soil emission controls are not applicable as there is no direct release to soil.
Volatile compounds subject to air emission controls.

Organisational measures to prevent/limit release from site : Prevent discharge of undissolved substance to or recover from onsite wastewater.

Conditions and measures related to sewage treatment plant : Not applicable.

Conditions and measures related to external treatment of waste for disposal : Not applicable.

Conditions and measures related to external recovery of waste : Not applicable.

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

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..

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)

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: 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)

Technical conditions and measures at process level (source) to prevent release : Handle substance within a closed system.

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: 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)

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: General exposures (closed systems)

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)**Technical conditions and measures at process level (source) to prevent release** : Handle substance within a closed system.**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: 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)**Technical conditions and measures at process level (source) to prevent release** : Handle substance within a closed system.**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)**Technical conditions and measures at process level (source) to prevent release** : Drain down and flush 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**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)**Technical conditions and measures at process level (source) to prevent release** : Store substance within a closed system.**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):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 3: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 4: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 5: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Workers: 6: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

Environment	: Not applicable.
Health	: Available hazard data do not support the need for a DNEL to be established for other health effects. 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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

Short title of the exposure scenario : Functional fluids - Industrial

List of use descriptors : **Identified use name:** Functional fluids - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09
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, PROC04, PROC08a, PROC08b, PROC09
Bulk transfers (closed systems) - PROC01, PROC02
Drum/batch transfers - PROC08b
Filling of articles/equipment - PROC09
Filling/preparation of equipment from drums or containers. - PROC08a
General exposures (closed systems) - PROC02, PROC03
General exposures (open systems) - PROC04
Remanufacture of reject articles - PROC09
Equipment maintenance - PROC08a
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario : Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 100 tonnes/year
 Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
 Soil emission controls are not applicable as there is no direct release to soil.
 Volatile compounds subject to air emission controls.

Organisational measures to prevent/limit release from site	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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..

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)
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: Bulk transfers (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)
Technical conditions and measures at process level (source) to prevent release	: Transfer via enclosed lines.
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: 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)
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 of articles/equipment

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)

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 6: 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 : Avoid carrying out activities involving exposure for more than 4 hours

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: 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)

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: 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 a good standard of general ventilation (not less than 3 to 5 air changes per hour).

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: Remanufacture of reject 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)
Ventilation control measures	: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
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	: Avoid carrying out activities involving exposure for more than 4 hours
Technical conditions and measures at process level (source) to prevent release	: Drain down and flush 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

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)
Technical conditions and measures at process level (source) to prevent release	: Store substance within a closed system.
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.
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Exposure estimation and reference to its source - Environment: 1: General exposures

Exposure assessment (environment):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
Exposure estimation and reference to its source	: ESVOC SPERC 7.13a.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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 3: Bulk transfers (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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 4: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 5: Filling of articles/equipment

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 6: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 7: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: Remanufacture of reject 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

Environment	: Not applicable.
Health	: Available hazard data do not support the need for a DNEL to be established for other health effects. 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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

Short title of the exposure scenario : Use in laboratories - Industrial
List of use descriptors : **Identified use name:** Use in laboratories - Industrial
Process Category: 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 - PROC15**
Laboratory activities - PROC15

Processes and activities covered by the exposure scenario : Use of the substance within laboratory settings, including material transfers and equipment cleaning

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Not applicable.
Amounts used : Annual site tonnage (tonnes/year): 100 tonnes/year
Fraction of EU tonnage used in region: 1
Frequency and duration of use : Continuous release
Emission days (days per year): 20 days per year
Environment factors not influenced by risk management : Not applicable.
Other conditions affecting environmental exposure : Not applicable.
Technical conditions and measures at process level (source) to prevent release : Not applicable.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
Soil emission controls are not applicable as there is no direct release to soil.
Volatile compounds subject to air emission controls.
Organisational measures to prevent/limit release from site : Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant : Not applicable.
Conditions and measures related to external treatment of waste for disposal : Not applicable.

Conditions and measures related to external recovery of waste : Not applicable.

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

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..

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)

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: 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)

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): : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
ECETOC TRA environment

Exposure estimation and reference to its source : ESVOC SPERC 4.24.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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 3: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

Short title of the exposure scenario : Use in mining chemicals - Industrial

List of use descriptors : **Identified use name:** Use in mining chemicals - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09
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, PROC08a, PROC08b, PROC09
Bulk transfers (closed systems) - PROC02
Drum/batch transfers - PROC08b
Pouring from small containers - PROC09
General exposures (closed systems) - PROC03
General exposures (open systems) - PROC05
Phase separation - PROC04
Ion exchange processes - PROC02
Process sampling - PROC03
Mixing operations (closed systems) - PROC01
Equipment cleaning and maintenance - PROC08a
Storage - PROC01

Processes and activities covered by the exposure scenario : Covers the use of the substance in extraction processes at mining operations, including material transfers, winning and separation activities, and substance recovery and disposal.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 2 000 tonnes/year
Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required Soil emission controls are not applicable as there is no direct release to soil. Volatile compounds subject to air emission controls.
Organisational measures to prevent/limit release from site	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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..

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)
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: Bulk transfers (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)
Technical conditions and measures at process level (source) to prevent release	: Transfer via enclosed lines.
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: 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)**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: 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** : Avoid carrying out activities involving exposure for more than 4 hours**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: 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)**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: 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)**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**Personal protection** : Wear suitable gloves tested to EN374.**Contributing scenario controlling worker exposure for 8: Phase separation**

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)**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: Ion exchange processes

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)

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: 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)

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: 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)

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)

Technical conditions and measures at process level (source) to prevent release : Drain down and flush 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

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)

Technical conditions and measures at process level (source) to prevent release : Store substance within a closed system.

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): : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
ECETOC TRA environment

Exposure estimation and reference to its source : ESVOG SPERC 4.23.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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 3: Bulk transfers (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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 4: 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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 5: Pouring from small 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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 6: 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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 7: 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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: Phase separation

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: Ion exchange 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 10: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 11: Mixing operations (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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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 exposures** - 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) - PROC01, PROC02
Filling/preparation of equipment from drums or containers. - PROC02
Preparation of material for application - PROC03
Film formation - air drying - PROC04
Film formation - PROC04
Preparation of material for application (Indoor) - PROC05
Preparation of material for application (Outdoor) - PROC05
Material transfers - PROC08a
Material transfers - PROC08b
Roller, spreader, flow application - PROC10
Roller, spreader, flow application - PROC10
Manual spraying - PROC11
Spraying - PROC11
Dipping, immersion and pouring - PROC13
Dipping, immersion and pouring - PROC13
Laboratory activities - PROC15
Hand application - finger paints, pastels, adhesives - PROC19
Hand application - fingerpaints, pastels, adhesives - PROC19
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, 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 exposures

Product characteristics	: Not applicable.
Amounts used	: Annual site tonnage (tonnes/year): 100 tonnes/year Fraction of EU tonnage used in region: 0.1
Frequency and duration of use	: Continuous release Emission days (days per year): 300 days per year
Environment factors not influenced by risk management	: Not applicable.
Other conditions affecting environmental exposure	: Not applicable.
Technical conditions and measures at process level (source) to prevent release	: Not applicable.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required Soil emission controls are not applicable as there is no direct release to soil. Volatile compounds subject to air emission controls.
Organisational measures to prevent/limit release from site	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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)
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)**Technical conditions and measures at process level (source) to prevent release** : Handle substance within a closed system.**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.**

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)**Technical conditions and measures at process level (source) to prevent release** : Handle substance within a closed system.**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: Preparation of material for application**

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)**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 6: Film formation - air drying**

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** : Covers daily exposures up to 8 hours (unless stated differently)**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
- Respiratory protection** : Wear a respirator conforming to EN140 with type A filter or better.

Contributing scenario controlling worker exposure for 7: Film formation

air drying / 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)
- 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
- Respiratory protection** : Wear a respirator conforming to EN140 with type A filter or better.

Contributing scenario controlling worker exposure for 8: Preparation of material for 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)
- Ventilation control measures** : Provide a good standard of controlled ventilation (10 to 15 air changes per hour).

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: Preparation of material for 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** : Covers daily exposures up to 8 hours (unless stated differently)
- 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 10: 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** : Avoid carrying out activities involving exposure for more than 1 hour

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: Material transfers

Drum/batch transfers / Dedicated facility

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)**Ventilation control measures** : Provide extract ventilation to material transfer points and other 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 12: 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** : Avoid carrying out activities involving exposure for more than 4 hours**Ventilation control measures** : Provide a good standard of controlled ventilation (10 to 15 air changes per hour).**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: 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** : Covers daily exposures up to 8 hours (unless stated differently)**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**Respiratory protection** : Wear a respirator conforming to EN140 with type A filter or better.**Contributing scenario controlling worker exposure for 14: Manual spraying**

Indoor

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** : Avoid carrying out activities involving exposure for more than 4 hours**Technical conditions and measures at process level (source) to prevent release** : 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

Personal protection : Wear suitable gloves tested to EN374.
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.

Contributing scenario controlling worker exposure for 15: Spraying

Manual / Outdoor

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)

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 suitable gloves tested to EN374.
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.

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

Contributing scenario controlling worker exposure for 16: Dipping, immersion and pouring

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)

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

Organisational measures to prevent/limit releases, dispersion and exposure : Avoid manual contact with wet work pieces.

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: Dipping, immersion and pouring

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 : Covers daily exposures up to 8 hours (unless stated differently)

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

Personal protection : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 18: 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)
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 19: Hand application - finger paints, pastels, adhesives

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)
Ventilation control measures	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
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 'basic' employee training.

Contributing scenario controlling worker exposure for 20: Hand application - fingerpaints, pastels, adhesives

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	: Covers daily exposures up to 8 hours (unless stated differently)
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 'basic' employee training.
Respiratory protection	: Wear a respirator conforming to EN140 with type A filter or better.

Contributing scenario controlling worker exposure for 21: 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)
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

Contributing scenario controlling worker exposure for 22: 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)
Technical conditions and measures at process level (source) to prevent release	: Store substance within a closed system.
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):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 5: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 6: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 7: Film formation

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: Preparation of material for application (Indoor)

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: Preparation of material for application (Outdoor)

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 10: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 11: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 12: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 13: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 14: Manual spraying

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 15: Spraying

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 16: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 17: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 18: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 19: Hand application - finger paints, 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 20: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 21: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 22: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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
Bulk transfers - PROC08b
Drum/batch transfers - PROC08b
Refuelling - PROC08b
General exposures (closed systems) - PROC01, PROC02, PROC03
Use as a fuel - PROC16
Equipment cleaning and maintenance - PROC08a
Storage - PROC01

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 : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 200 tonnes/year
Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
Soil emission controls are not applicable as there is no direct release to soil.
Volatile compounds subject to air emission controls.

Organisational measures to prevent/limit release from site : Prevent discharge of undissolved substance to or recover from onsite wastewater.

Conditions and measures related to sewage treatment plant : Not applicable.

Conditions and measures related to external treatment of waste for disposal : Not applicable.

Conditions and measures related to external recovery of waste : Not applicable.

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

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..

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)

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: 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 : Avoid carrying out activities involving exposure for more than 4 hours

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: 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)

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: 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)
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 6: 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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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: Use as a fuel

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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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: 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)
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

Contributing scenario controlling worker exposure for 9: 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)
Technical conditions and measures at process level (source) to prevent release	: Store substance within a closed system.
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):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 3: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 4: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 5: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 6: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 7: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 9: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

Short title of the exposure scenario : Functional fluids - Professional

List of use descriptors : **Identified use name:** Functional fluids - Professional
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC09, PROC20
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, PROC09, PROC20
Drum/batch transfers - PROC08a
Transfer from/pouring from containers - PROC09
Filling/preparation of equipment from drums or containers. - PROC09
General exposures (closed systems) - PROC01, PROC02, PROC03
Operation of equipment containing engine oils and similar - PROC20
Remanufacture of reject articles - PROC09
Equipment maintenance - PROC08a
Storage - PROC01, PROC02

Processes and activities covered by the exposure scenario : Use as functional fluids e.g. cable oils, transfer oils, insulators, refrigerants, hydraulic fluids in closed professional equipment including incidental exposures during maintenance and related material transfers.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Not applicable.

Amounts used : Annual site tonnage (tonnes/year): 100 tonnes/year
Fraction of EU tonnage used in region: 1

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

Environment factors not influenced by risk management : Not applicable.

Other conditions affecting environmental exposure : Not applicable.

Technical conditions and measures at process level (source) to prevent release : Not applicable.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
Soil emission controls are not applicable as there is no direct release to soil.
Volatile compounds subject to air emission controls.

Organisational measures to prevent/limit release from site : Prevent discharge of undissolved substance to or recover from onsite wastewater.

Conditions and measures related to sewage treatment plant : Not applicable.

Conditions and measures related to external treatment of waste for disposal : Not applicable.

Conditions and measures related to external recovery of waste : Not applicable.

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

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..

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)

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: 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)

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 4: Transfer from/pouring from 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)

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 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)
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 6: 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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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: Operation of equipment containing engine oils and similar

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)
Technical conditions and measures at process level (source) to prevent release	: Handle substance within a closed system.
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: Remanufacture of reject 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	: Avoid carrying out activities involving exposure for more than 4 hours
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)
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

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)
Technical conditions and measures at process level (source) to prevent release	: Store substance within a closed system.
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):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
Exposure estimation and reference to its source	: ESVOC SPERC 9.13b.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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 3: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 4: 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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 6: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 7: Operation of equipment containing engine oils and similar

- Exposure assessment (human):** : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
- Exposure estimation and reference to its source** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 8: Remanufacture of reject 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

Short title of the exposure scenario : Use in laboratories - Professional
List of use descriptors : **Identified use name:** Use in laboratories - Professional
Process Category: PROC15
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental contributing scenarios :
Health Contributing scenarios : **General measures applicable to all activities - PROC15**
Laboratory activities - PROC15

Processes and activities covered by the exposure scenario : Use of the substance within laboratory settings, including material transfers and equipment cleaning

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

Product characteristics : Not applicable.
Amounts used : Annual site tonnage (tonnes/year): 100 tonnes/year
Fraction of EU tonnage used in region: 0.1
Frequency and duration of use : Continuous release
Emission days (days per year): 20 days per year
Environment factors not influenced by risk management : Not applicable.
Other conditions affecting environmental exposure : Not applicable.
Technical conditions and measures at process level (source) to prevent release : Not applicable.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : If discharging to domestic sewage treatment plant, additional onsite wastewater treatment required
Soil emission controls are not applicable as there is no direct release to soil.
Volatile compounds subject to air emission controls.
Organisational measures to prevent/limit release from site : Prevent discharge of undissolved substance to or recover from onsite wastewater.
Conditions and measures related to sewage treatment plant : Not applicable.
Conditions and measures related to external treatment of waste for disposal : Not applicable.

Conditions and measures related to external recovery of waste : Not applicable.

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

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..

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)

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: 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)

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:

Exposure assessment (environment): : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
ECETOC TRA environment

Exposure estimation and reference to its source : ESVOC SPERC 8.17.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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Workers: 3: 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** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

- Environment** : Not applicable.
- Health** : Available hazard data do not support the need for a DNEL to be established for other health effects.
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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

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

List of use descriptors : **Identified use name:** Use in coatings - 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: PC01, PC04, PC08, PC09a, PC09b, PC09c, PC15, PC18, PC23, PC24, PC31, PC34

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

Health Contributing scenarios : **General measures applicable to all activities** - PC01, PC04, PC08, PC09a, PC09b, PC09c, PC15, PC18, PC23, PC24, PC31, PC34
Glues, hobby use - PC01
Glues DIY-use (carpet glue, tile glue, wood parquet glue) - PC01
Glue from spray - PC01
Sealants - PC01
Washing car window - PC04
Pouring into radiator - PC04
Lock de-icer - PC04
Laundry and dish-washing products - PC08
Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) - PC08
Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) - PC08
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
Fillers and putty - PC09b
Plasters and floor equalisers - PC09b
Modelling clay - PC09b
Finger paints - PC09c
Non-metal-surface treatment products: Waterborne latex wall paint - PC15
Non-metal-surface treatment products: waterborne paint - PC15
Non-metal-surface treatment products: aerosol sprays - PC15
Non-metal-surface treatment products: Removers - PC15
Ink and toners - PC18
Polishes, wax / cream (floor, furniture, shoes) - PC23
Polishes, spray (furniture, shoes) - PC23
Liquid - PC24
Pastes - PC24
Sprays - PC24
Polishes, wax/cream (floor, furniture, shoes) - PC31
Polishes, spray (furniture, shoes) - PC31
Textile dyes and impregnating products - PC34

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics	: Not applicable.
Amounts used	: Annual site tonnage (tonnes/year): 100 tonnes/year Fraction of EU tonnage used in region: 0.1 Maximum daily site tonnage (kg/day): Not applicable.
Frequency and duration of use	: Not applicable.
Environment factors not influenced by risk management	: Not applicable.
Other conditions affecting environmental exposure	: Not applicable.
Conditions and measures related to sewage treatment plant	: Not applicable.
Conditions and measures related to external treatment of waste for disposal	: Not applicable.
Conditions and measures related to external recovery of waste	: Not applicable.

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

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. Keep away from sources of ignition - No smoking. Review SDS for additional advice..

Product characteristics	: Liquid
Amounts used	: Not applicable.
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: Glues, hobby use

Adhesives, sealants

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 30 %
Amounts used	: Covers skin contact area up to 35.73 cm ² For each use event, covers use amounts up to 9 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 4 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 4: Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Adhesives, sealants

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 30 %

Amounts used : Covers skin contact area up to 110 cm²
For each use event, covers use amounts up to 6 390 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 1 days per year
Covers use under typical household ventilation.
Covers exposure up to 6 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: Glue from spray

Adhesives, sealants

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 30 %

Amounts used : Covers skin contact area up to 35.73 cm²
For each use event, covers use amounts up to 85.05 g
Covers use in room size of 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 use under typical household ventilation.
Covers exposure up to 4 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 6: Sealants

Adhesives, sealants

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 30 %

Amounts used : Covers skin contact area up to 35.73 cm²
For each use event, covers use amounts up to 75 g
Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 1 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 7: 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 857.5 cm ² For each use event, covers use amounts up to 0.5 g Covers use in room size of 34 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 use in a one car garage (34 m ³) under typical ventilation. Covers exposure up to 0.02 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 8: 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 428 cm ² For each use event, covers use amounts up to 2 000 g Covers use in room size of 34 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 use in a one car garage (34 m ³) under typical ventilation. Covers exposure up to 0.17 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 9: Lock de-icer

Anti-freeze and de-icing products

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 50 %
Amounts used	: Covers skin contact area up to 214.4 cm ² For each use event, covers use amounts up to 4 g Covers use in room size of 34 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 use in a one car garage (34 m ³) under typical ventilation. Covers exposure up to 0.25 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 10: Laundry and dish-washing products

Biocidal products (Disinfectants, Pest control)

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 5 %
Amounts used	: Covers skin contact area up to 857.5 cm ² For each use event, covers use amounts up to 15 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 0.5 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 11: Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners)

Biocidal products (Disinfectants, Pest control)

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 5 %
Amounts used	: Covers skin contact area up to 857.5 cm ² For each use event, covers use amounts up to 27 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 0.33 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 12: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Biocidal products (Disinfectants, Pest control)

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 15 %

Amounts used	: Covers skin contact area up to 428 cm ² For each use event, covers use amounts up to 35 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 0.17 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 13: 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 428.75 cm ² For each use event, covers use amounts up to 2 760 g Covers use in room size of 20 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 use under typical household ventilation. Covers exposure up to 2.2 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 14: 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 27.5 %
Amounts used	: Covers skin contact area up to 428.75 cm ² For each use event, covers use amounts up to 744 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 2.2 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 15: Aerosol spray can

Coatings and paints, thinners, paint removers

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 50 %
Amounts used	: For each use event, covers use amounts up to 215 g Covers use in room size of 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 use in a one car garage (34 m ³) under typical ventilation. Covers exposure up to 0.33 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 16: 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 50 %
Amounts used	: Covers skin contact area up to 857.5 cm ² For each use event, covers use amounts up to 491 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 2 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 17: Fillers and putty

Fillers, putties, plasters, modelling clay

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 2 %
Amounts used	: Covers skin contact area up to 35.73 cm ² For each use event, covers use amounts up to 85 g Covers use in room size of 20 m ³
Frequency and duration of use/exposure	: Covers use up to 1 times per day Covers use up to 12 days per year Covers use under typical household ventilation. Covers exposure up to 4 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 18: Plasters and floor equalisers

Fillers, putties, plasters, modelling clay

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 2 %

Amounts used : Covers skin contact area up to 857.5 cm²
For each use event, covers use amounts up to 13 800 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 12 days per year
Covers use under typical household ventilation.
Covers exposure up to 2 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 19: Modelling clay

Fillers, putties, plasters, modelling clay

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 1 %

Amounts used : Covers skin contact area up to 254.4 cm²
For each use event, covers use amounts up to 13 800 g
For each use event, assumes swallowed amount of 1 g
Covers use in room size of 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 use under typical household ventilation.
Covers exposure up to 6 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 20: Finger paints

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 254.4 cm²
For each use event, covers use amounts up to 13 800 g
For each use event, assumes swallowed amount of 1.35 g
Covers use in room size of 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 use under typical household ventilation.
Covers exposure up to 6 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 21: Non-metal-surface treatment products:**Waterborne latex wall paint**

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 1.5 %
Amounts used	: Covers skin contact area up to 428.75 cm ² For each use event, covers use amounts up to 2 760 g Covers use in room size of 20 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 use under typical household ventilation. Covers exposure up to 2.2 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 22: Non-metal-surface treatment products: waterborne paint

Solvent-rich, high-solid, water-borne paint

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 27.5 %
Amounts used	: Covers skin contact area up to 428.75 cm ² For each use event, covers use amounts up to 744 g Covers use in room size of 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 use under typical household ventilation. Covers exposure up to 2.2 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 23: Non-metal-surface treatment products: aerosol sprays

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 50 %
Amounts used	: Covers skin contact area up to 857.5 cm ² For each use event, covers use amounts up to 215 g Covers use in room size of 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 use in a one car garage (34 m ³) under typical ventilation.1.5 ach (air changes per hour) Covers exposure up to 0.33 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 24: Non-metal-surface treatment products: Removers

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 857.5 cm²
For each use event, covers use amounts up to 491 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 3 days per year
Covers use under typical household ventilation.
Covers exposure up to 2 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 25: Ink and toners

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 10 %

Amounts used : Covers skin contact area up to 71.4 cm²
For each use event, covers use amounts up to 40 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 365days per year
Covers use under typical household ventilation.
Covers exposure up to 2.2 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 26: Polishes, wax / cream (floor, furniture, shoes)

Leather treatment products / Impregnation agent / Tanning of leather. / Leather finishing.

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 430 cm²
For each use event, covers use amounts up to 56 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 29 days per year
Covers use under typical household ventilation.
Covers exposure up to 1.23 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 27: Polishes, spray (furniture, shoes)

Leather treatment products / Impregnation agent / Tanning of leather. / Leather finishing.

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 430 cm²
For each use event, covers use amounts up to 56 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 8 days per year
Covers use under typical household ventilation.
Covers exposure up to 0.33 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 28: Liquid

Lubricants, greases, release products

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 100 %

Amounts used : Covers skin contact area up to 468 cm²
For each use event, covers use amounts up to 2 200 g
Covers use in room size of 34 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 4 days per year
Covers use in a one car garage (34 m³) under typical ventilation.
Covers exposure up to 0.17 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 29: Pastes

Lubricants, greases, release products

Product characteristics : Paste.

Concentration of substance in mixture or article : Covers concentrations up to 20 %

Amounts used : Covers skin contact area up to 468 cm²
For each use event, covers use amounts up to 34 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 10 days per year
Covers use under typical household ventilation.
Covers exposure up to 4 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 30: Sprays

Lubricants, greases, release products

Product characteristics : Spray

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 428.75 cm²
For each use event, covers use amounts up to 73 g
Covers use in room size of 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 use under typical household ventilation.
Covers exposure up to 0.17 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 31: Polishes, wax/cream (floor, furniture, shoes)

Polishes and wax blends

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 430 cm²
For each use event, covers use amounts up to 142 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 29 days per year
Covers use under typical household ventilation.
Covers exposure up to 1.23 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 32: Polishes, spray (furniture, shoes)

Polishes and wax blends

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 50 %

Amounts used : Covers skin contact area up to 430 cm²
For each use event, covers use amounts up to 35 g
Covers use in room size of 20 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 8 days per year
Covers use under typical household ventilation.
Covers exposure up to 0.33 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 33: Textile dyes and impregnating products

Bleaching aid. / Other processing aids

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 10 %

Amounts used : Covers skin contact area up to 857.5 cm²
For each use event, covers use amounts up to 115 g
Covers use in room size of 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 use under typical household ventilation.
Covers exposure up to 1 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

Website: : Not applicable.

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

Exposure assessment (environment): : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
ECETOC TRA environment

Exposure estimation and reference to its source : ESVOC SPERC 8.3c.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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 3: Glues, hobby use

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 4: Glues DIY-use (carpet glue, tile glue, wood parquet glue)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 5: Glue from spray

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 6: Sealants

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 7: Washing car window

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 8: Pouring into radiator

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 9: Lock de-icer

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 10: Laundry and dish-washing products

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 11: 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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 12: Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 13: Water-borne latex wall paint

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 14: Solvent-rich, high-solid, water-borne paint

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 15: Aerosol spray can

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 16: Removers (paint-, glue-, wall paper-, sealant-remover)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 17: Fillers and putty

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 18: Plasters and floor equalisers

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 19: Modelling clay

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 20: Finger paints

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 21: Non-metal-surface treatment products: Waterborne latex wall paint

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 22: Non-metal-surface treatment products: waterborne paint

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 23: Non-metal-surface treatment products: aerosol sprays

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 24: Non-metal-surface treatment products: Removers

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 25: Ink and toners

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 26: Polishes, wax / cream (floor, furniture, shoes)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 27: Polishes, spray (furniture, shoes)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 28: Liquid

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 29: Pastes

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 30: Sprays

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 31: Polishes, wax/cream (floor, furniture, shoes)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 32: Polishes, spray (furniture, shoes)

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 33: Textile dyes and impregnating products

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

Environment : Not applicable.

Health : 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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

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
Liquid: lamp oil - PC13
Liquid: home space heater fuel - 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): 100 tonnes/year
Fraction of EU tonnage used in region: 0.1
Maximum daily site tonnage (kg/day): Not applicable.
Regional use tonnage (tonnes/year): 0.1 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 : Not applicable.
Other conditions affecting environmental exposure : Not applicable.
Conditions and measures related to sewage treatment plant : Not applicable.
Conditions and measures related to external treatment of waste for disposal : Not applicable.
Conditions and measures related to external recovery of waste : Not applicable.

Contributing scenario controlling consumer exposure for 2: General measures applicable to all activities**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. Keep away from sources of ignition - No smoking. Review SDS for additional advice..

Product characteristics : Liquid

Amounts used : Not applicable.

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 210 cm²
For each use event, covers use amounts up to 37 500 g
Covers use in room size of 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)
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 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 210 cm²
For each use event, covers use amounts up to 3 750 g
Covers use in room size of 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 0.03 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 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 750 g Covers use in room size of 100 m ³
Frequency and duration of use/exposure	: Covers use up to 1 times per day Covers use up to 26 days per year Covers outdoor use. 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.
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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 420 cm ² For each use event, covers use amounts up to 750 g Covers use in room size of 34 m ³
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 0.03 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.
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Contributing scenario controlling consumer exposure for 7: Liquid: lamp oil

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 100 %
Amounts used	: Covers skin contact area up to 210 cm ² For each use event, covers use amounts up to 100 g Covers use in room size of 20 m ³
Frequency and duration of use/exposure	: Covers use up to 1 times per day Covers use up to 52 days per year Covers exposure up to 0.01 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.
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Contributing scenario controlling consumer exposure for 8: Liquid: home space heater fuel

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers concentrations up to 100 %
Amounts used	: Covers skin contact area up to 210 cm ² For each use event, covers use amounts up to 3 000 g Covers use in room size of 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 0.03 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):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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 : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 7: Liquid: lamp oil

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

Exposure estimation and reference to its source - Consumers: 8: Liquid: home space heater fuel

Exposure assessment (human): : ECETOC TRA, consumer

Exposure estimation and reference to its source : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

Environment : Not applicable.

Health : 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 : Mono-constituent substance
Code : 1161092_13528078
Product name : EXXONMOBIL™ DIPE

Section 1 - Title

Short title of the exposure scenario : Functional fluids - Consumer
List of use descriptors : **Identified use name:** Functional fluids - 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: PC16, PC17
Environmental contributing scenarios : **General exposures** - ERC09a, ERC09b
Health Contributing scenarios : **General measures applicable to all activities** - PC16, PC17
Heat transfer fluids - PC16
Hydraulic fluids - PC17

Processes and activities covered by the exposure scenario : Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: General exposures

Product characteristics : Not applicable.
Amounts used : Annual site tonnage (tonnes/year): 100 tonnes/year
Fraction of EU tonnage used in region: 0.1
Maximum daily site tonnage (kg/day): Not applicable.
Regional use tonnage (tonnes/year): 100 tonnes/year
Frequency and duration of use : Not applicable.
Environment factors not influenced by risk management : Not applicable.
Other conditions affecting environmental exposure : Not applicable.
Conditions and measures related to sewage treatment plant : Not applicable.
Conditions and measures related to external treatment of waste for disposal : Not applicable.
Conditions and measures related to external recovery of waste : Not applicable.

Contributing scenario controlling consumer exposure for 2: General measures applicable to all activities**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. Keep away from sources of ignition - No smoking. Review SDS for additional advice..

Product characteristics : Liquid

Amounts used : Not applicable.

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: Heat transfer fluids

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 100 %

Amounts used : Covers skin contact area up to 468 cm²
For each use event, covers use amounts up to 2 200 g
Covers use in room size of 34 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 4 days per year
Covers use in a one car garage (34 m³) under typical ventilation.
Covers use up to 0.17 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 4: Hydraulic fluids

Product characteristics : Liquid

Concentration of substance in mixture or article : Covers concentrations up to 100 %

Amounts used : Covers skin contact area up to 468 cm²
For each use event, covers use amounts up to 2 200 g
Covers use in room size of 34 m³

Frequency and duration of use/exposure : Covers use up to 1 times per day
Covers use up to 4 days per year
Covers use in a one car garage (34 m³) under typical ventilation.
Covers use up to 0.17 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

Website:	: Not applicable.
Exposure estimation and reference to its source - Environment: 1: General exposures	
Exposure assessment (environment):	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented. ECETOC TRA environment
Exposure estimation and reference to its source	: ESVOC SPERC 9.13c.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	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Consumers: 3: Heat transfer fluids	
Exposure assessment (human):	: ECETOC TRA, consumer
Exposure estimation and reference to its source	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.
Exposure estimation and reference to its source - Consumers: 4: Hydraulic fluids	
Exposure assessment (human):	: ECETOC TRA, consumer
Exposure estimation and reference to its source	: Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

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

Environment	: Not applicable.
Health	: 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.

EXXONMOBIL™ DIPE