SAFETY DATA SHEET

EXXSOL™ DHN 40 JO

ExxonMobil

Section 1. Identification

Product name : EXXSOL™ DHN 40 JO

Regulatory reference : Not available.

Product description : Aliphatic Hydrocarbon

Identification data of the safety data sheet

OKPD 2 : Not available.

TN VED : Not available.

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

Identified uses : Solvent

Uses advised against : This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.

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SDS Internet Address : www.sds.exxonmobil.com

Section 2. Hazards identification

Classification of the substance or mixture according to GOST 32419-2022 and GOST 32423/24/25-2013

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SKIN CORROSION/IRRITATION - Category 2
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
ASPIRATION HAZARD - Category 1
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

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.
P264 - Wash thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

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

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.

Contains : naphtha (petroleum), hydrodesulfurized light, dearomatized; naphtha (petroleum), hydrotreated light; solvent naphtha (petroleum), hydrotreated light naphthenic and cyclohexane

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

Substance/mixture : Mixture

General description of the composition/Method of production : Not available.

Ingredient name	%	Identifiers	Exposure limits	Type
naphtha (petroleum), hydrodesulfurized light, dearomatized	≥25 - ≤50	CAS: 92045-53-9 EC: 927-510-4	-	[1]
naphtha (petroleum), hydrotreated light	≥25 - ≤50	CAS: - EC: 931-254-9	**ACGIH TLV (United States, 1/2024)** **[branched hexane isomers]** TWA 8 hours: 200 ppm. **ACGIH TLV (United States, 1/2024)** **[hexane]** Absorbed through skin. TWA 8 hours: 100 ppm.	[1] [2]
solvent naphtha (petroleum),	≥10 - ≤25	CAS: 92062-15-2 EC: 926-605-8	-	[1]

Section 3. Composition/information on ingredients

hydrotreated light naphthenic				
cyclohexane	<15	CAS: 110-82-7 EC: 203-806-2	**Ministry of Health and Social Development MAC (Russian Federation, 3/2023)** Hazard class 4. STEL 15 minutes: 80 mg/m³. Form: vapor and/or gases. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 100 ppm.	[1] [2]
n-hexane	≤3	CAS: 110-54-3 EC: 203-777-6	**Ministry of Health and Social Development MAC (Russian Federation, 3/2023)** Hazard class 4. TWA 8 hours: 300 mg/m³. Form: vapor and/or gases. STEL 15 minutes: 900 mg/m³. Form: vapor and/or gases. **ACGIH TLV (United States, 1/2024)** Absorbed through skin. TWA 8 hours: 50 ppm.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard
[2] Substance with a workplace exposure limit

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

Section 4. First-aid measures

Description of necessary first aid measures

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

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

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Continue to rinse for at least 10 minutes. Get medical attention.

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

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First-aid measures

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

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
Numbness, muscle cramps, weakness and paralysis that may be delayed.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately. This material, or a component, may be associated with cardiac sensitization following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine. Administration of such substances should be avoided.

Specific treatments : No specific treatment.

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.

See toxicological information (Section 11)

Section 5. Firefighting measures

General characteristics of fire and explosion hazards : Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst.

Indicators of fire and explosion hazard of chemical products

Flash point : Closed cup: <0°C (<32°F) [Calculated]

Ignition temperature : Not available.

Auto-ignition temperature : 258°C (496.4°F) [Extrapolated]

Lower and upper explosion limit/flammability limit : Lower: 1% [Extrapolated]
Upper: 8%

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Section 5. Firefighting measures

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. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Incomplete combustion products, Oxides of carbon, Smoke, Fume

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.

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".

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

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Eliminate all ignition sources. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. If the Flash Point exceeds the Ambient Temperature by 10

Section 6. Accidental release measures

deg C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. Seek the advice of a specialist before using dispersants. Warn other shipping. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Static Accumulator : This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

Transport Temperature : Ambient

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.

Storage Temperature : Ambient

Storage Pressure : Ambient

Suitable Containers/Packing : Tank Trucks, Drums, Barges, Tankers, Railcars, Tank Cars

Suitable Materials and Coatings : Carbon Steel, Stainless Steel, polyethylene, polypropylene, Teflon, Polyester

Unsuitable Materials and Coatings : Natural Rubber, butyl rubber, Ethylene-proplyene-diene monomer (EPDM), Polystyrene

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
-	**ExxonMobil (COMPANY)** RCP - TWA: 264 ppm (Total Hydrocarbons). Form: Vapour.. RCP - TWA: 1000 mg/m³ (Total Hydrocarbons). Form: Vapour..
naphtha (petroleum), hydrotreated light	**ACGIH TLV (United States, 1/2024) [branched hexane isomers]** TWA 8 hours: 200 ppm. **ACGIH TLV (United States, 1/2024) [hexane]** Absorbed through skin. TWA 8 hours: 100 ppm.
cyclohexane	**Ministry of Health and Social Development MAC (Russian Federation, 3/2023)** Hazard class 4. STEL 15 minutes: 80 mg/m³. Form: vapor and/or gases. **ACGIH TLV (United States, 1/2024)** TWA 8 hours: 100 ppm.
n-hexane	**Ministry of Health and Social Development MAC (Russian Federation, 3/2023)** Hazard class 4. TWA 8 hours: 300 mg/m³. Form: vapor and/or gases. STEL 15 minutes: 900 mg/m³. Form: vapor and/or gases. **ACGIH TLV (United States, 1/2024)** Absorbed through skin. TWA 8 hours: 50 ppm.

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

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

Individual protection measures

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

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

Skin protection

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

Section 8. Exposure controls/personal protection

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. Recommended: organic vapour filter (Type AX)

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.

Appearance

Physical state : Liquid. [Clear]

Colour : Colourless

Odour : Slight

Odour threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : 64 to 110°C (147.2 to 230°F) [ASTM D1078]

Flash point : Closed cup: <0°C (<32°F) [Calculated]

Evaporation rate : 8.4 (butyl acetate = 1) [In-house method ,]

Flammability : Flammable liquids - Category 2

Lower and upper explosion limit/flammability limit : Lower: 1% [Extrapolated]
Upper: 8%

Vapour pressure : 112.51 mm Hg [20 °C] [Calculated]

Relative vapour density : 3.1 [Air = 1] [In-house method ,]

Relative density : 0.71 [Calculated]

Density : 0.71 g/cm³ [15°C (59°F)] [ISO 12185]

Solubility in water : Negligible

Partition coefficient: n-octanol/water : <4 [Estimated]

Auto-ignition temperature : 258°C (496.4°F) [Extrapolated]

Decomposition temperature : Not applicable.

Viscosity : 0.5 cSt [20 °C] [ASTM D341]

Molecular weight : 91

Particle characteristics

Median particle size : Not applicable.

Pour point : <-20°C [Calculated]

Hygroscopic : No

Coefficient of Thermal Expansion : 0.00129 per Deg C

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

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

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.

Incompatible materials : Reactive or incompatible with the following materials:,oxidising materials,Strong oxidisers

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
EXXSOL™ DHN 40 JO	**Rat - Oral - LD50** >5000 mg/kg **Rabbit - Dermal - LD50** >2920 mg/kg **Rat - Inhalation - LC50 Vapour** >20 mg/l [4 hours]

Conclusion/Summary

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

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

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

Irritation/Corrosion

Conclusion/Summary

Skin : Irritating to the skin. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 404

Eyes : May cause mild, short-lasting discomfort to eyes. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405

Respiratory : Negligible hazard at ambient/normal handling temperatures. No end point data for material.

Respiratory or skin sensitization

Conclusion/Summary

Skin : Not expected to be a skin sensitizer. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406

Respiratory : Not expected to be a respiratory sensitizer. No end point data for material.

Mutagenicity

Conclusion/Summary : Not expected to be a germ cell mutagen. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 473 475 476

Carcinogenicity

Section 11. Toxicological information

Conclusion/Summary : Not expected to cause cancer. No end point data for material.

Reproductive toxicity

Conclusion/Summary : Not expected to be a reproductive toxicant. Data available. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 414 416

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)

Product/ingredient name	Category	Target organs
EXXSOL™ DHN 40 JO	Not applicable.	-

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

Aspiration hazard

Product/ingredient name	Result
EXXSOL™ DHN 40 JO	Category 1

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

Other information

Contains : N-HEXANE: Prolonged and/or repeated exposures to n-Hexane can cause progressive and potentially irreversible damage to the peripheral nervous system (e.g. fingers, feet, arms, legs, etc.). Simultaneous exposure to Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) and n-Hexane can potentiate the risk of adverse effects from n-Hexane on the peripheral nervous system. n-Hexane has been shown to cause testicular damage at high doses in male rats. The relevance of this effect for humans is unknown.

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. Exposure to this material, or one of its components, in situations where there is the potential for high levels, such as in confined spaces or with abuse, may result in abnormal heart rhythm (arrhythmia). High-level exposure to hydrocarbons (above occupational exposure limits) may initiate arrhythmia in a worker that is undergoing stress or is taking a heart-stimulating substance such as epinephrine, a nasal decongestant, or an asthma or cardiovascular drug. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

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.

General characteristics of the impact on environmental objects : Toxic to aquatic life with long lasting effects. Can contaminate bodies of water.

Ways of affecting the environment : Violation of storage and transport regulations, incorrect placement and incineration of waste, discharge into bodies of water or the ground, accidents and emergencies.

Toxicity

Section 12. Ecological information

Product/ingredient name	Result
EXXSOL™ DHN 40 JO	**Acute - LL50** Fish - *Oncorhynchus mykiss* 12 mg/l - data for similar materials [96 hours] **Acute - EL50** Algae - *Pseudokirchneriella subcapitata* 29 mg/l - data for similar materials [72 hours] **Acute - NOEL** Algae - *Pseudokirchneriella subcapitata* 6.3 mg/l - data for similar materials [72 hours] **Acute - EL50** daphnia - *Daphnia magna* 3 mg/l - data for similar materials [48 hours] **Chronic - LOEL** daphnia - *Daphnia magna* 2 mg/l - data for similar materials [21 days] **Chronic - EL50** daphnia - *Daphnia magna* 1.6 mg/l - data for similar materials [21 days] **Chronic - NOEL** daphnia - *Daphnia magna* 1 mg/l - data for similar materials [21 days]

Conclusion/Summary

Acute toxicity : Toxic to aquatic life.

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

Persistence and degradability

Product/ingredient name	Result
EXXSOL™ DHN 40 JO	Ready Biodegradability >60% [28 days]

Biodegradability : Material -- Available OECD 301F biodegradation data indicate that material is readily biodegradable (=60% in 28 days).

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

Bioaccumulative potential

Not determined.

Environmental limits

Ingredient name	Exposure limits
cyclohexane	**Water quality standards for water bodies of fishery significance, including standards for maximum permissible concentrations of harmful substances in the waters of water bodies of fishery significance. (Russian Federation) [Циклогексан]** MAC: 0.01 mg/l toxicological, Hazard class 3 **SANPIN 1.2.3685-21, Table 3.13: Maximum allowable concentrations (MAC) of chemicals in drinking water of centralised, including hot, non-centralised water supply systems (Russian Federation) [Циклогексан]** MAC: 0.1 mg/l sanitary and toxicological, Hazard class 2 **SANPIN 1.2.3685-21, Table 1.1: Maximum allowable concentrations (MAC) of pollutants in the atmospheric air of urban and rural settlements (Russian Federation) [Циклогексан]** MAC - maximum single: 1.4 mg/m³ reflexive effect, Hazard class 4
n-hexane	**Water quality standards for water bodies of fishery significance, including standards for maximum permissible concentrations of harmful substances in the waters of water bodies of fishery significance. (Russian Federation) [Гексан]** MAC: 0.5 mg/l toxicological, Hazard class 3 **SANPIN 1.2.3685-21, Table 1.1: Maximum allowable concentrations (MAC) of**

Section 12. Ecological information

	pollutants in the atmospheric air of urban and rural settlements (Russian Federation) [Гексан] MAC - average daily: 7 mg/m³ reflexive effect, Hazard class 4 MAC - maximum single: 60 mg/m³ reflexive effect, Hazard class 4

Mobility in soil

Mobility : Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

Other ecological information

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

Section 13. Disposal considerations

Disposal methods : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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	IMDG	IATA
UN number	UN3295	UN3295	UN3295
UN proper shipping name	HYDROCARBONS, LIQUID, N.O.S.	HYDROCARBONS, LIQUID, N.O.S.	Hydrocarbons, liquid, n.o.s.
Transport hazard class(es)	3	3	3
Label(s) / Mark(s)			
Packing group	II	II	II
Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Section 14. Transport information

ADR : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Hazard identification number 33
Limited quantity 1 L
Special provisions 640D
Tunnel code (D/E)

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-E, S-D

Flash point <0 °C C.C.

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.
Special provisions A3, A324

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.

Transport in bulk according to IMO instruments : Not applicable.

Section 15. Regulatory information

Inventory list

Australia inventory (AIIC)	: 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)	: Not determined.
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.

The national inventory listings are based on the CAS number or numbers listed below.
68410-97-9; 64742-49-0; 92045-53-9; 92062-15-2

Section 16. Other information

History

Date of issue/Date of revision	: 28 August 2025
Date of previous issue	: 28 August 2025
Version	: 1.05

Section 16. Other information

Key to abbreviations : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GOST = Gosudarstvennyy standart
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SGG = Segregation Group
UN = United Nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	Expert judgment
SKIN CORROSION/IRRITATION - Category 2	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3	Expert judgment
ASPIRATION HAZARD - Category 1	Expert judgment
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 2	Expert judgment
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	Expert judgment

References : Not available.

Indicates information that has changed from previously issued version.

Product code : 1166803

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