

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier

Product name: POWERZOL™ 9049
UFI: C4N6-J0WN-8004-95GK

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

Identified uses: Aftermarket Diesel
Uses advised against: None identified.

1.3 Details of the supplier of the safety data sheet

Supplier

Company Name: LUBRIZOL LIMITED
Address: THE KNOWLE, NETHER LANE
HAZELWOOD, DERBYSHIRE, DE56 4AN
GB
Telephone: (44) 01332-842211
E-mail contact: EUSDS@lubrizol.com {Lubrizol Safety Data Sheets can be obtained at
www.mylubrizol.com}

1.4 Emergency telephone number:

FOR TRANSPORT EMERGENCY CALL CHEMTREC (+1) 703 527 3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Skin irritation	Category 2	H315: Causes skin irritation.
Serious eye irritation	Category 2	H319: Causes serious eye irritation.

The full text for all H-phrases is displayed in section 16.

2.2 Label elements according to Regulation (EC) No 1272/2008 as amended



Signal Words: Warning

Hazard Statement(s): H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary Statements

Prevention:

P264: Wash face, hands and any exposed skin thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P302+P352: IF ON SKIN: Wash with plenty of water.
P362+P364: Take off contaminated clothing and wash it before reuse.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.

Supplemental label information

EUH066: Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards:

Endocrine Disruption- Toxicity

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine Disruption- Ecotoxicity

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Regulation No. 1272/2008.

Chemical name	Concentration	EC No.	REACH Registration No.	M-Factor:	Notes
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics	20 - 50%	918-481-9	01-2119457273-39		
2-Ethylhexan-1-ol	10 - 20%	203-234-3	01-2119487289-20		#
Distillates (petroleum), hydrotreated heavy paraffinic	1 - 10%	265-157-1	01-2119484627-25		#

This substance has workplace exposure limit(s).

600, 700 and 900 ECHA List Numbers do not have any legal significance; rather they are purely technical identifiers and are displayed for informational purposes only.

Classification Regulation No. 1272/2008.

Chemical name	Classification	Notes
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics	Asp. Tox. 1; H304	
2-Ethylhexan-1-ol	Acute Tox. 4; H332 Skin Corr. 2; H315 STOT SE 3; H335 Eye Dam. 2; H319	
Distillates (petroleum), hydrotreated heavy paraffinic	Asp. Tox. 1; H304	

The full text for all H-phrases is displayed in section 16.

See Section 15 for Regulation (EC) No. 1907/2006 REACH Article 59(1). Candidate List (Substances of Very High Concern (SVHC))

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Inhalation:** Remove exposed person to fresh air if adverse effects are observed.
- Eye contact:** Rinse cautiously with water for several minutes. Flush thoroughly with water. If irritation occurs, get medical assistance. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Skin Contact:** Take off contaminated clothing and wash before re-use. Wash skin thoroughly with soap and water. Wash with soap and water. If skin irritation occurs, get medical attention. Get medical attention if symptoms occur. Launder contaminated clothing before reuse.
- Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

- 4.2 Most important symptoms and effects, both acute and delayed:** See section 11.

4.3 Indication of any immediate medical attention and special treatment needed

- Hazards:** No data available.
- Treatment:** Treat symptomatically.

SECTION 5: Firefighting measures

- General Fire Hazards:** Move containers from fire area if you can do so without risk.

5.1 Extinguishing media
Suitable extinguishing media:

CO2, Dry chemical or Foam. Water can be used to cool and protect exposed material.

Unsuitable extinguishing media:

Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture:

Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations. Vapors may travel considerable distance to a source of ignition and flash back. Water may cause splattering. Container may rupture on heating. A solid stream of water will spread the burning material. Material creates a special hazard because it floats on water. See section 10 for additional information.

**5.3 Advice for firefighters
Special fire-fighting procedures:**

No data available.

Special protective equipment for fire-fighters:

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental Precautions:

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up:

In case of leakage, eliminate all ignition sources. Dike far ahead of larger spill for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

6.4 Reference to other sections:

See sections 8 and 13 for additional information.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin. Avoid contact with eyes. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Launder contaminated clothing before reuse.

Vapours are heavier than air and will tend to accumulate in low areas. Avoid use in confined areas without adequate ventilation. Areas of inadequate ventilation could contain concentrations high enough to cause eye irritation, headaches, respiratory discomfort or nausea. Carefully evaluate processes using this product at elevated temperatures to ensure safe operating conditions. Electrostatic buildup may occur when pouring or transferring this product from its container. The spark produced may be sufficient to ignite vapors of flammable liquids. Always transfer product by means which avoid static buildup. Avoid pouring product directly from its container into combustible or flammable solvent. Static ignition hazard can result from handling and use. Electrically bond and ground all containers and equipment before transfer or use of material. Do not breathe thermal decomposition products.

Maximum Handling Temperature: 50 °C

7.2 Conditions for safe storage, including any incompatibilities: Store in containers made of same material as original container. Keep cool. Store in a well-ventilated place. Store away from incompatible materials. See section 10 for incompatible materials. Do not store near potential sources of ignition.

Maximum Storage Temperature: 45 °C

7.3 Specific end use(s): End uses are listed in an attached exposure scenario when one is required.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
2-Ethylhexan-1-ol	TWA	1 ppm 5.4 mg/m3	Ireland. OELVs, Schedule 1 (Code of Practice for Chemical Agents Regulations), as amended (2018)
2-Ethylhexan-1-ol	TWA	1 ppm 5.4 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (02 2017)
Distillates (petroleum), hydrotreated heavy paraffinic - Inhalable fraction.	TWA	5 mg/m3	Ireland. OELVs, Schedule 1 (Code of Practice for Chemical Agents Regulations), as amended (01 2020)

DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics	General population	Eyes	Local effect;	No hazard identified

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics	General population	Oral	Systemic, long-term; 18.75 mg/kg bw/day	Repeated dose toxicity
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics	Workers	Eyes	Local effect;	No hazard identified
2-Ethylhexan-1-ol	General population	Dermal	Systemic, long-term; 11.4 mg/kg	Repeated dose toxicity
2-Ethylhexan-1-ol	Workers	Dermal	Systemic, long-term; 23 mg/kg	Repeated dose toxicity
2-Ethylhexan-1-ol	Workers	Inhalation	Local, short-term; 53.2 mg/m3	irritation respiratory tract
2-Ethylhexan-1-ol	General population	Inhalation	Local, short-term; 26.6 mg/m3	irritation respiratory tract
2-Ethylhexan-1-ol	Workers	Inhalation	Systemic, long-term; 12.8 mg/m3	Repeated dose toxicity
2-Ethylhexan-1-ol	General population	Oral	Systemic, long-term; 1.1 mg/kg	Repeated dose toxicity
2-Ethylhexan-1-ol	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)
2-Ethylhexan-1-ol	General population	Inhalation	Local, long-term; 26.6 mg/m3	irritation respiratory tract
2-Ethylhexan-1-ol	General population	Inhalation	Systemic, long-term; 2.3 mg/m3	Repeated dose toxicity
2-Ethylhexan-1-ol	Workers	Inhalation	Local, long-term; 53.2 mg/m3	irritation respiratory tract
2-Ethylhexan-1-ol	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
Distillates (petroleum), hydrotreated heavy paraffinic	Workers	Inhalation	Systemic, long-term; 2.73 mg/m3	Repeated dose toxicity
Distillates (petroleum), hydrotreated heavy paraffinic	General population	Eyes	Local effect;	No hazard identified
Distillates (petroleum), hydrotreated heavy paraffinic	Workers	Dermal	Systemic, long-term; 0.97 mg/kg	Repeated dose toxicity
Distillates (petroleum), hydrotreated heavy paraffinic	General population	Oral	Systemic, long-term; 0.74 mg/kg	Repeated dose toxicity
Distillates (petroleum), hydrotreated heavy paraffinic	Workers	Eyes	Local effect;	No hazard identified
Distillates (petroleum), hydrotreated heavy paraffinic	Workers	Inhalation	Local, long-term; 5.58 mg/m3	Repeated dose toxicity
Distillates (petroleum), hydrotreated heavy paraffinic	General population	Inhalation	Local, long-term; 1.19 mg/m3	Repeated dose toxicity

PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
2-Ethylhexan-1-ol	Predator	55 mg/kg	Oral
2-Ethylhexan-1-ol	Aquatic (marine water)	0.002 mg/l	
2-Ethylhexan-1-ol	Sediment (freshwater)	0.284 mg/kg	
2-Ethylhexan-1-ol	Aquatic (freshwater)	0.017 mg/l	
2-Ethylhexan-1-ol	Soil	0.047 mg/kg	

2-Ethylhexan-1-ol	Sediment (marine water)	0.028 mg/kg	
2-Ethylhexan-1-ol	Sewage treatment plant	10 mg/l	
Distillates (petroleum), hydrotreated heavy paraffinic	Predator	9.33 mg/kg	Oral

8.2 Exposure controls

Appropriate engineering controls:

No special requirements under ordinary conditions of use and with adequate ventilation. Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

General information:

Please follow the recommended personal protective equipment (PPE) guidelines below and refer to the appropriate EN standard where applicable. Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection:

Wear tight-fitting goggles or face shield. Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield. Eye protection should meet the standards set out in EN 166.

Skin protection

Hand Protection:

Use nitrile or neoprene gloves. Use good industrial hygiene practices. In case of skin contact, wash hands and arms with soap and water. Chemical resistant gloves

General:

Because specific work environments and material handling practices vary, safety procedures should be specific for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures). Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions. For typical use and handling of chemical substances, gloves should meet the standards set out in EN 374. For applications involving mechanical risks with potential for abrasion or puncture, the standards set out in EN 388 should be considered. For tasks involving thermal hazards, the standards set out in EN 407 should be considered.

Break-through time: Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.

For continuous contact, we suggest gloves with a minimum breakthrough time of 240 minutes, or > 480 minutes if suitable gloves can be obtained. If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to. For short-term, transient exposures and splash protection, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove thickness: For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It is important to note that glove thickness is not the only predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.

Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, before being disposed of. Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Other: Wear apron or protective clothing in case of contact. Do not wear rings, watches or similar apparel that could entrap the material. Gloves, coveralls, apron, boots as necessary to minimize contact.

Respiratory Protection: A respiratory protection program compliant with all applicable regulations must be followed whenever workplace conditions require the use of a respirator. Use respirator with an organic vapor and dust/mist cartridge if the recommended exposure limit is exceeded. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites. Use respirator with a combination organic vapor and dust/mist cartridge.

Respiratory Protective Equipment (RPE) is not normally required where there is adequate natural or local exhaust ventilation to control exposure. In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment.

Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Please refer to the relevant EN standards for the RPE selected.

Hygiene measures: Observe good industrial hygiene practices. Avoid contact with skin. Avoid contact with eyes. Wash contaminated clothing before reuse. When using do not smoke. Wash hands before breaks and immediately after handling the product.

Environmental Controls: No data available.
See section 6 for details.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: liquid
Form: liquid
Color: Dark red

Odor: Mild

Odor Threshold: No data available.

pH: Not applicable

Freezing point: No data available.

Boiling Point: No data available.

Flash Point: 67 °C (Pensky-Martens Closed Cup)

Evaporation Rate: No data available.

Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability Limit - Upper (%): No data available.

Flammability Limit - Lower (%): No data available.

Vapor pressure: No data available.

Relative vapor density: No data available.

Relative density: 0.872 - 0.912 (15.6 °C)

Solubility(ies)

Solubility in Water: Insoluble in water

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Autoignition Temperature: No data available.

Decomposition Temperature: No data available.

Viscosity:	225 mm ² /s (40 °C); 2600 mm ² /s (0 °C)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
VOC Content:	No data available.

Particle characteristics

Particle Size:	Not applicable
Particle Size Distribution:	Not applicable
Specific surface area:	Not applicable
Surface charge/Zeta potential:	Not applicable
Assessment:	Not applicable
Shape:	Not applicable
Crystallinity:	Not applicable
Surface treatment:	Not applicable

Other information

Bulk density:	7.44 lb/gal (25 °C)
Pour Point Temperature:	-54 °C

SECTION 10: Stability and reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of hazardous reactions:	Will not occur.
10.4 Conditions to avoid:	Heat, sparks, flames. Excessive heat. Contact with acids. Strong caustic agents.
10.5 Incompatible Materials:	Strong oxidizing agents. Oxidizing agents, Reactive metals, Sodium or Calcium Hypochlorite. Avoid heat or Dehydrating Agents. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Materials reactive with hydroxyl compounds. Strong acids. Lead and lead alloys
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.

Skin Contact: Causes skin irritation.

Eye contact: Causes serious eye irritation.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product: Not classified for acute toxicity based on available data. Ingestion can cause central nervous system effects such as headache, dizziness, drowsiness, and generalized weakness. Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Dermal

Product: Not classified for acute toxicity based on available data.

Inhalation

Product: Dust and mist: ATEmix (4 h): 10 - 20 mg/l. High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.

Skin Corrosion/Irritation:

Product: Remarks: Causes skin irritation. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.

Serious Eye Damage/Eye Irritation:

Product: Remarks: Causes serious eye irritation.

Respiratory sensitization:

No data available

Skin sensitization:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

Classification: Not a skin sensitizer. (Literature) Not a skin sensitizer.

2-Ethylhexan-1-ol

Classification: Not a skin sensitizer. (Literature)

Distillates (petroleum), hydrotreated heavy paraffinic

Classification: Not a skin sensitizer. (Read across)

Specific Target Organ Toxicity - Single Exposure:

Product:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract similar to that observed with mineral oil. Under good industrial hygiene practices where all exposure limits are observed respiratory irritation should not be a problem.

2-Ethylhexan-1-ol

Respiratory tract irritation.

Aspiration Hazard:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Distillates (petroleum), hydrotreated heavy paraffinic

Material can be aspirated into the lungs during the act of swallowing or vomiting. This could result in severe injury to the lungs and death.

Other effects:

Product:

If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.

Chronic Effects

Carcinogenicity:

Product:

This product contains mineral oils which are severely refined and not considered carcinogenic. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

Not classified

Distillates (petroleum), hydrotreated heavy paraffinic

All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test. This product contains mineral oils which are severely refined and not considered carcinogenic.

Germ Cell Mutagenicity:

2-Ethylhexan-1-ol

This material has not exhibited mutagenic or genotoxic potential in laboratory tests.

Reproductive toxicity:

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

Not classified

2-Ethylhexan-1-ol

No evidence of adverse effects were found in a developmental toxicity study of 2-ethylhexanol in rats. Doses up to 3 ml/kg applied to the skin during the most critical part of the gestation period produced evidence of toxicity to mothers, but no evidence of injury in the developing offspring. In a previous study, birth defects were observed by oral administration, an unlikely route of exposure in the workplace.

Specific Target Organ Toxicity - Repeated Exposure:

2-Ethylhexan-1-ol

Repeated overexposure may result in liver and kidney damage. A 14-day dermal toxicity study of 2-ethylhexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides. Unknown: Target Organ(s): Blood, Liver, Spleen., Kidney

11.2 Information on health hazards

Other hazards

Product:

If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.;

Endocrine Disruption

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.;

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

LL 50 (Oncorhynchus mykiss, 96 h): > 1,000 mg/l

2-Ethylhexan-1-ol

LC 50 (Fathead Minnow, 4 d): 28.2 mg/l

LC 50 (Golden Orfe, 4 d): 17.1 mg/l

Distillates (petroleum), hydrotreated heavy paraffinic

LC 50 (Fathead Minnow, 96 h): > 100 mg/l

Aquatic Invertebrates

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics

EC 50 (Water Flea (Daphnia Magna), 48 h): > 1,000 mg/l

2-Ethylhexan-1-ol

EC 50 (Water flea (Daphnia magna), 2 d): 39 mg/l

Distillates (petroleum),

EC 50 (Water flea (Daphnia magna), 48 h): > 10,000 mg/l

hydrotreated heavy paraffinic EC 50 (Water flea (*Daphnia magna*), 21 d): > 10 mg/l
NOEC (Water flea (*Daphnia magna*), 21 d): 10 mg/l

Toxicity to Aquatic Plants

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics EC 50 (Algae (*Pseudokirchneriella subcapitata*), 72 h): > 1,000 mg/l

2-Ethylhexan-1-ol EC 50 (Green algae (*Scenedesmus quadricauda*), 3 d): 16.6 mg/l

Distillates (petroleum), hydrotreated heavy paraffinic EC 50 (Algae (*Pseudokirchneriella subcapitata*), 72 h): > 100 mg/l
NOEC (Algae (*Pseudokirchneriella subcapitata*), 72 h): >= 100 mg/l

Toxicity to soil dwelling organisms

No data available

Sediment Toxicity

No data available

Toxicity to Terrestrial Plants

No data available

Toxicity to Above-Ground Organisms

No data available

Toxicity to microorganisms

2-Ethylhexan-1-ol EC 50 (*Pseudomonas putida*, 0.1 d): 540 mg/l
EC 50 (Sludge, 0.5 d): > 100 mg/l

12.2 Persistence and Degradability

Biodegradation

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics OECD TG 301 F, 80 %, 28 d, Readily biodegradable

2-Ethylhexan-1-ol OECD TG 302 B, 95 %, 5 d, Readily biodegradable
OECD TG 301 C, 100 %, 14 d, Readily biodegradable

Distillates (petroleum), hydrotreated heavy paraffinic OECD TG 301 F, 31 %, 28 d, Not readily degradable.

BOD/COD Ratio

No data available

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

2-Ethylhexan-1-ol Bioconcentration Factor (BCF): 25.35 (calculated)

Partition Coefficient n-octanol / water (log K_{ow})

2-Ethylhexan-1-ol Log K_{ow}: 2.9 (Measured)

12.4 Mobility:

2-Ethylhexan-1-ol

soil - 1.42

12.5 Results of PBT and vPvB assessment

No data available

12.6 Endocrine Disruption:

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product.

Contaminated Packaging: Container packaging may exhibit hazards.

SECTION 14: Transport information

ADR

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

None known.

Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. For transportation, steps must be taken to prevent load shifting or materials falling, and all relating legal statutes should be obeyed. Review classification requirements before shipping materials at elevated temperatures.

SECTION 15: Regulatory information

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

EU Regulations**EU. Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances:**

None present or none present in regulated quantities.

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended:

None present or none present in regulated quantities.

EU. Chemicals Subject to PIC Procedure: Regulation 649/2012/EU on export and import of dangerous chemicals, as amended:

None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List:

None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended:

None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

The packaging shall be visibly, legibly and indelibly marked as follows:

Restricted to professional users.

Chemical name	EC No.	Concentration
Methyloxirane	200-879-2	<0.1%

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.:

None present or none present in regulated quantities.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.:

None present or none present in regulated quantities.

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:

None present or none present in regulated quantities.

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:

None present or none present in regulated quantities.

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	EC No.	Concentration
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, less than 2% aromatics	918-481-9	20 - 30%
Distillates (petroleum), hydrotreated heavy paraffinic	265-157-1	1.0 - 10%

Inventory Status

Australia (AIIC)

All components are in compliance with chemical notification requirements in Australia.

Canada (DSL/NDSL)

All substances contained in this product are in compliance with the Canadian Environmental Protection Act and are present on the Domestic Substances List (DSL) or are exempt.

China (IECSC)

This product contains a substance or polymer that has been notified and is restricted to import by the notifier.

European Union (REACH)

To obtain information on the REACH compliance status of this product, please e-mail REACH@SDSInquiries.com.

Great Britain (UK REACH)

To obtain information on the UK REACH compliance status of this product, please e-mail REACH@SDSInquiries.com.

Japan (ENCS)

This product contains a substance or polymer that has been notified and is restricted to import by specific legal entities.

Korea (ECL)

All components are in compliance in Korea.

New Zealand (NZIoC)

All components are in compliance with chemical notification requirements in New Zealand.

Philippines (PICCS)

All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (R.A. 6969).

Switzerland (SWISS)

All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.

Taiwan (TCSCA)

All components of this product are listed on the Taiwan inventory.

Turkey (KKDIK)

To obtain information on the KKDIK compliance status of this product, please e-mail REACH@SDSInquiries.com.

United States (TSCA)

All substances contained in this product are listed on the TSCA inventory or are exempt.

The information that was used to confirm the compliance status of this product may deviate from the chemical information shown in Section 3.

15.2 Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Key literature references and sources for data: Internal company data and other publically available resources.

Wording of the H-statements in section 2 and 3:

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Other information: Revision(s) are noted by the double bar in the margin and the light gray box.

Abbreviations and acronyms:

ACGIH – American Conference of Governmental Industrial Hygienist
 ADR - International Carriage of Dangerous Goods by Road
 AICS - Australian Inventory of Chemical Substances
 ATEmix - Acute Toxicity Estimate for the mixture
 BCF - Bio concentration factor
 DMSO - Dimethyl sulfoxide
 DSL - Domestic Substance List
 EC50 - Effective concentration that gives a response in 50% of the population
 ECHA - European Chemical Agency
 ECL - Existing Chemical List
 ENCS - Existing and New Chemical Substances
 EPA – Environmental Protection Agency
 IARC - International Agency for Research on Cancer
 IATA - International Air Transport Association
 IECSC - Inventory of Existing Chemical Substances
 IMDG - International Maritime Dangerous Goods
 IP 346 – A gravimetric assay used to determine the percentage weight of polycyclic aromatics in oil, via a DMSO extraction technique
 LC50 - Lethal concentration required to kill 50% of the population
 MARPOL - International Conventions for the Prevention of Pollution from Ships
 NDSL - Non Domestic Substance List
 NOAEC - No observed adverse effect concentration
 NOAEL - No observed adverse effect level
 NOEC - No observed effective concentration
 NTP - National Toxicology Program
 NZloc - New Zealand Inventory of chemicals
 OECD TG - Organization for Economic Cooperation and Development Test Guidelines
 OSHA – Occupational, Safety, and Health Administration

PBT – Persistent bioaccumulative toxic chemical
PEL – Permissible Exposure Level
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PPE - Personal Protective Equipment
PRTR - Pollutant Release and Transfer Register
REACH - Registration, Evaluation, Authorization & restriction of Chemicals
SVHC - Substance of Very High Concern
SWISS - Switzerland chemical ordinance
TCSCA - Toxic Chemical Substance Control Act
TLV – Threshold Limit Value
TSCA - Toxic Substances Control Act
TWA – Time Weighted Average
vPvB – very Persistent very Bioaccumulative

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