



SAFETY DATA SHEET

SPECIALTY PRODUCTS FINLAND OY

Safety Data Sheet according to Reg. (EU) No 2015/830

Product name: MOLYKOTE® Omnigliss Extreme Pressure
Oil, Spray

Revision Date: 2018/10/22

Version: 1.0

Date of last issue: -

Print Date: 2020/04/30

SPECIALTY PRODUCTS FINLAND OY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: MOLYKOTE® Omnigliss Extreme Pressure Oil, Spray

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

Identified uses: Lubricants and lubricant additives

1.3 Details of the supplier of the safety data sheet

COMPANY IDENTIFICATION

SPECIALTY PRODUCTS FINLAND OY

BULEVARDI 7

00120 HELSINKI

FINLAND

Customer Information Number:

800-3876-6838

SDSQuestion-EU@dupont.com

1.4 EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: +(358)-942419014

Local Emergency Contact: +(358)-942419014

Finnish Emergency Center: +358 9 471 977

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

Aerosols - Category 1 - H222, H229

Serious eye damage - Category 1 - H318

Chronic aquatic toxicity - Category 3 - H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms



Signal word: DANGER

Hazard statements

- H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/ face protection.
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON
+ P338 + CENTER/doctor.
P310
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Contains Calcium hydroxide

2.3 Other hazards

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Hydrocarbon aerosol propellant

3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
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CASRN 64742-55-8 EC-No. 265-158-7 Index-No. 649-468-00-3	—	>= 30,0 - < 40,0 %	Distillates (petroleum), hydrotreated light paraffinic	Asp. Tox. - 1 - H304
CASRN 64742-47-8 EC-No. 265-149-8 Index-No. 649-422-00-2	01-2119480162-45	>= 10,0 - < 20,0 %	Distillates (petroleum), hydrotreated light; Kerosine - unspecified	Asp. Tox. - 1 - H304
CASRN 1305-62-0 EC-No. 215-137-3 Index-No. —	—	>= 3,0 - < 10,0 %	Calcium hydroxide	Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318 STOT SE - 3 - H335
CASRN 95-38-5 EC-No. 202-414-9 Index-No. —	—	>= 0,1 - < 0,25 %	1H-Imidazole-1- ethanol, 2-(8- heptadecenyl)-4,5- dihydro-	Acute Tox. - 4 - H302 Skin Corr. - 1C - H314 STOT RE - 2 - H373 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410

Substances with a workplace exposure limit

CASRN 106-97-8 EC-No. 203-448-7 Index-No. 601-004-00-0	01-2119474691-32	>= 30,0 - < 40,0 %	Butane	Flam. Gas - 1 - H220 Press. Gas - Compr. Gas - H280
CASRN 74-98-6 EC-No. 200-827-9 Index-No. 601-003-00-5	01-2119486944-21	>= 1,0 - < 10,0 %	propane	Flam. Gas - 1 - H220 Press. Gas - Compr. Gas - H280
CASRN 64742-52-5 EC-No. 265-155-0 Index-No. 649-465-00-7	—	>= 1,0 - < 10,0 %	Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified	Asp. Tox. - 1 - H304

For the full text of the H-Statements mentioned in this Section, see Section 16.

Note

Distillates (petroleum), hydrotreated light paraffinic:

The classification as a carcinogen need not to apply because the substance contains less than 3% DMSO extract as measured by IP 346. Note L of Annex VI to Regulation (EC) 1272/2008.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

4.2 Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water spray Alcohol-resistant foam Carbon dioxide (CO₂) Dry chemical

Unsuitable extinguishing media: Do not use direct water stream.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon oxides Metal oxides

Unusual Fire and Explosion Hazards: Flash back possible over considerable distance. May form explosive mixtures in air. Exposure to combustion products may be a hazard to health. If the

temperature rises there is danger of the vessels bursting due to the high vapor pressure. Vapours may form explosive mixtures with air.

5.3 Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Do not use a solid water stream as it may scatter and spread fire.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

6.2 Environmental precautions: Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up: Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections:

See sections: 7, 8, 11, 12 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling: Do not get on skin or clothing. Avoid inhalation of vapour or mist. Do not swallow. Do not get in eyes. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Do not spray on an open flame or other ignition source. Use only with adequate ventilation. Use only in an area equipped with explosion proof exhaust ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

7.2 Conditions for safe storage, including any incompatibilities: Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not pierce or burn, even after use. Keep cool. Protect from sunlight.

Do not store with the following product types: Self-reactive substances and mixtures. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Oxidizing agents.

Unsuitable materials for containers: None known.

7.3 Specific end use(s): See the technical data sheet on this product for further information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Distillates (petroleum), hydrotreated light paraffinic	ACGIH	TWA Inhalable fraction	5 mg/m3
	FI OEL	HTP-arvot 8h Mist	5 mg/m3
Distillates (petroleum), hydrotreated light; Kerosine - unspecified	ACGIH	TWA	200 mg/m3 , total hydrocarbon vapor
	FI OEL	HTP-arvot 8h Mist	5 mg/m3
Calcium hydroxide	ACGIH	TWA	5 mg/m3
	91/322/EEC	TWA	5 mg/m3
	FI OEL	HTP-arvot 8h	5 mg/m3
	2017/164/EU	TWA Respirable fraction	1 mg/m3
	2017/164/EU	STEL Respirable fraction	4 mg/m3
Butane	ACGIH	STEL	1 000 ppm
	FI OEL	HTP-arvot 8h	1 900 mg/m3 800 ppm
	FI OEL	HTP-arvot 15 min	2 400 mg/m3 1 000 ppm
propane	ACGIH		Asphyxiant
	FI OEL	HTP-arvot 8h	1 500 mg/m3 800 ppm

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil - unspecified	FI OEL	HTP-arvot 15 min	2 000 mg/m3 1 100 ppm
	ACGIH	TWA Inhalable fraction	5 mg/m3
	FI OEL	HTP-arvot 8h Mist	5 mg/m3

This material contains a simple asphyxiant which may displace oxygen. Insure adequate ventilation to prevent an oxygen deficient atmosphere.
The minimum requirement of 19.5% oxygen at sea level (148 torr O₂, dry air) provides an adequate amount of oxygen for most work assignments.

Derived No Effect Level

Calcium hydroxide

Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	4 mg/m3	n.a.	n.a.	n.a.	1 mg/m3

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	4 mg/m3	n.a.	n.a.	n.a.	n.a.	1 mg/m3

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Workers

Acute systemic effects		Acute local effects		Long-term systemic effects		Long-term local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
2 mg/kg bw/day	14 mg/m3	n.a.	n.a.	0,06 mg/kg bw/day	0,46 mg/m3	n.a.	n.a.

Consumers

Acute systemic effects			Acute local effects		Long-term systemic effects			Long-term local effects	
Dermal	Inhalation	Oral	Dermal	Inhalation	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Predicted No Effect Concentration

Distillates (petroleum), hydrotreated light paraffinic

Compartment	PNEC
Oral (Secondary Poisoning)	9,33 mg/kg food

Calcium hydroxide

Compartment	PNEC
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Fresh water	0,49 mg/l
Marine water	0,32 mg/l
Intermittent use/release	0,49 mg/l
Sewage treatment plant	3 mg/l
Soil	1080 mg/kg

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Compartment	PNEC
Fresh water	0,0003 mg/l
Marine water	0,000003 mg/l
Intermittent use/release	0,0003 mg/l
Sewage treatment plant	0,27 mg/l
Fresh water sediment	0,376 mg/kg
Marine water	0,0376 mg/kg
Soil	0,075 mg/kg

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

Compartment	PNEC
Oral (Secondary Poisoning)	9,33 mg/kg food

8.2 Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE:

The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Aerosol containing a dissolved gas
Color	Straw-coloured
Odor	characteristic
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Extremely flammable aerosol.
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	0,73
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available

Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight	No data available
Particle size	Not applicable

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Not classified as a reactivity hazard.

10.2 Chemical stability: Stable under normal conditions.

10.3 Possibility of hazardous reactions: Can react with strong oxidizing agents. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure. Vapours may form explosive mixture with air. Extremely flammable aerosol.

10.4 Conditions to avoid: Heat, flames and sparks.

10.5 Incompatible materials: Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, Rat, > 5 000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):
LD50, Rabbit, > 3 000 mg/kg Estimated.

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Excessive exposure may cause headache, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats).
As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

May cause slight temporary eye irritation.
Corneal injury is unlikely.

Sensitization

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Available data are inadequate to determine single exposure specific target organ toxicity.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Contains component(s) which have been reported to cause effects on the following organs in animals:
Adrenal gland.
Bone marrow.
Liver.
Thymus.
Lung.
Stomach

Carcinogenicity

No relevant data found.

Teratogenicity

Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Mutagenicity

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains component(s) which were negative in animal genetic toxicity studies.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Distillates (petroleum), hydrotreated light paraffinic

Acute inhalation toxicity

LC50, Rat, 4 Hour, dust/mist, > 4 mg/l

Distillates (petroleum), hydrotreated light; Kerosine -unspecified

Acute inhalation toxicity

Based on data from similar materials LC50, Rat, 4 Hour, vapour, > 5,0 mg/l

Calcium hydroxide

Acute inhalation toxicity

As product: The LC50 has not been determined.

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Acute inhalation toxicity

The LC50 has not been determined.

Butane

Acute inhalation toxicity

LC50, Rat, 4 Hour, vapour, 658 mg/l

propane

Acute inhalation toxicity

LC50, Rat, male and female, 4 Hour, vapour, > 425000 ppm

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

Acute inhalation toxicity

LC50, Rat, 4 Hour, dust/mist, > 5,53 mg/l OECD Test Guideline 403

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

12.1 Toxicity

Distillates (petroleum), hydrotreated light paraffinic

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50, Pimephales promelas (fathead minnow), 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), 21 d, 10 mg/l, Test substance: Water Accommodated Fraction

Distillates (petroleum), hydrotreated light; Kerosine -unspecified

Acute toxicity to fish

Based on data from similar materials

LL50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 1 000 mg/l, OECD Test Guideline 203, Test substance: Water Accommodated Fraction

Acute toxicity to aquatic invertebrates

Based on data from similar materials

EL50, Daphnia magna (Water flea), 48 Hour, > 1 000 mg/l, OECD Test Guideline 202, Test substance: Water Accommodated Fraction

Acute toxicity to algae/aquatic plants

Based on data from similar materials

EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 1 000 mg/l, OECD Test Guideline 201, Test substance: Water Accommodated Fraction

Based on data from similar materials

NOELR, Pseudokirchneriella subcapitata (green algae), 72 Hour, 1 000 mg/l, OECD Test Guideline 201, Test substance: Water Accommodated Fraction

Toxicity to bacteria

Based on data from similar materials

EC50, Pseudomonas putida, 5 Hour, > 2 mg/l

Chronic toxicity to aquatic invertebrates

Based on data from similar materials

NOELR, Daphnia magna (Water flea), 21 d, > 1 mg/l, Test substance: Water Accommodated Fraction

Calcium hydroxide

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50, Gambusia affinis (Mosquito fish), 96 Hour, 160 mg/l

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, 49,1 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

EC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, 184,57 mg/l, OECD Test Guideline 201

Toxicity to bacteria

EC50, 3 Hour, 300,4 mg/l, OECD Test Guideline 209

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Acute toxicity to fish

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50, Brachydanio rerio (zebrafish), static test, 96 Hour, 0,3 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 0,163 mg/l

Acute toxicity to algae/aquatic plants

EC50, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 0,03 mg/l

Toxicity to bacteria

IC50, activated sludge, static test, 3 Hour, Respiration rates., 12 mg/l, OECD Test Guideline 209

Butane

Acute toxicity to fish

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

propane

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms.

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LL50, Pimephales promelas (fathead minnow), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

EL50, Daphnia magna (Water flea), 48 Hour, > 10 000 mg/l

Acute toxicity to algae/aquatic plants

EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

NOELR, Pseudokirchneriella subcapitata (green algae), 72 Hour, 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria

NOEC, 10 min, >= 1,93 mg/l

Chronic toxicity to aquatic invertebrates

NOELR, Daphnia magna (Water flea), 21 d, 10 mg/l

12.2 Persistence and degradability

Distillates (petroleum), hydrotreated light paraffinic

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

10-day Window: Fail

Biodegradation: 31 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Distillates (petroleum), hydrotreated light; Kerosine -unspecified

Biodegradability:

Biodegradation: 77,6 %

Exposure time: 28 d

Calcium hydroxide

Biodegradability: Biodegradation is not applicable.

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Biodegradation: 1 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

Butane

Biodegradability: Material is expected to be readily biodegradable.

propane

Biodegradability: No relevant data found.

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Fail

Biodegradation: 31 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential

Distillates (petroleum), hydrotreated light paraffinic

Bioaccumulation: For this family of materials: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Calcium hydroxide

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

Partition coefficient: n-octanol/water(log Pow): 7,19 at 25 °C

Butane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2,89 Measured

propane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2,36 Measured

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

Bioaccumulation: No relevant data found.

12.4 Mobility in soil

Distillates (petroleum), hydrotreated light paraffinic

No relevant data found.

Calcium hydroxide

No data available.

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

Expected to be relatively immobile in soil (Koc > 5000).

Partition coefficient (Koc): 125200

Butane

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 44 - 900 Estimated.

propane

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 24 - 460 Estimated.

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

No relevant data found.

12.5 Results of PBT and vPvB assessment

Distillates (petroleum), hydrotreated light paraffinic

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Distillates (petroleum), hydrotreated light; Kerosine -unspecified

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Calcium hydroxide

No specific, relevant data available for assessment.

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Butane

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

propane

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects

Distillates (petroleum), hydrotreated light paraffinic

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Distillates (petroleum), hydrotreated light; Kerosine -unspecified

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Calcium hydroxide

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

1H-Imidazole-1-ethanol, 2-(8-heptadecenyl)-4,5-dihydro-

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Butane

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

propane

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

SECTION 14: TRANSPORT INFORMATION

Classification for ROAD and Rail transport (ADR/RID):

- | | |
|---------------------------------|----------|
| 14.1 UN number | UN 1950 |
| 14.2 UN proper shipping name | AEROSOLS |
| 14.3 Transport hazard class(es) | 2.1 |

- | | | |
|------|------------------------------|---|
| 14.4 | Packing group | Not applicable |
| 14.5 | Environmental hazards | Not considered environmentally hazardous based on available data. |
| 14.6 | Special precautions for user | No data available. |

Classification for SEA transport (IMO-IMDG):

- | | | |
|------|--|---|
| 14.1 | UN number | UN 1950 |
| 14.2 | UN proper shipping name | AEROSOLS |
| 14.3 | Transport hazard class(es) | 2.1 |
| 14.4 | Packing group | Not applicable |
| 14.5 | Environmental hazards | Not considered as marine pollutant based on available data. |
| 14.6 | Special precautions for user | EmS: F-D, S-U |
| 14.7 | Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code | Consult IMO regulations before transporting ocean bulk |

Classification for AIR transport (IATA/ICAO):

- | | | |
|------|------------------------------|---------------------|
| 14.1 | UN number | UN 1950 |
| 14.2 | UN proper shipping name | Aerosols, flammable |
| 14.3 | Transport hazard class(es) | 2.1 |
| 14.4 | Packing group | Not applicable |
| 14.5 | Environmental hazards | Not applicable |
| 14.6 | Special precautions for user | No data available. |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

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

REACH Regulation (EC) No 1907/2006

This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no

warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Restrictions on the manufacture, placing on the market and use:

The following substance/s contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product have to comply with the restrictions placed upon it by the aforementioned provision.

CAS-No.: 106-97-8	Name: Butane
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Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction

CAS-No.: 64742-52-5	Name: Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil -unspecified
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Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Listed in Regulation: FLAMMABLE AEROSOLS

Number in Regulation: P3a

150 t

500 t

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

Number in Regulation: 34

2 500 t

25 000 t

Listed in Regulation: Liquefied extremely flammable gases (including LPG) and natural gas

Number in Regulation: 18

50 t

200 t

Further information

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

Not applicable

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008

Aerosol - 1 - H222 - Based on product data or assessment

Eye Dam. - 1 - H318 - Calculation method

Aquatic Chronic - 3 - H412 - Calculation method

Revision

Identification Number: 4045675 / A801 / Issue Date: 2018/10/22 / Version: 1.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

2017/164/EU	Commission Directive (EU) 2017/164 establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
91/322/EEC	Europe. Commission Directive 91/322/EEC on establishing indicative limit values
ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Asphyxiant	Asphyxiant
FI OEL	Finland. HTP Values - Concentrations Known to be Harmful
HTP-arvot 15 min	Short term exposure limit
HTP-arvot 8h	Long term exposure limit
STEL	Short term exposure limit
TWA	8-hour, time-weighted average
Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Asp. Tox.	Aspiration hazard
Eye Dam.	Serious eye damage
Flam. Gas	Flammable gases
Press. Gas	Gases under pressure
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -

Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

SPECIALTY PRODUCTS FINLAND OY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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