

Safety data sheet

according to 1907/2006/EC, Article 31 (2020/878)

Printing date: 21.11.2023

Version: 32 (replaces version 31)

Revision: 21.11.2023

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

- **1.1 Product identifier**
- **Trade name:** JLM Penetrating oil
- **Article number:** J04230
- **UFI:** 75QC-J03C-P00D-STEH
- **1.2 Relevant identified uses of the substance or mixture and uses advised against -**
- **Application of the substance / the mixture** Lubricant
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 JLM Lubricants BV
 Schiphol Boulevard 127
 1118 BG Schiphol
 The Netherlands
 Tel: +31 (0) 202014995
- **Further information obtainable from:** Research & Development:G.Groot
- **1.4 Emergency telephone number:** During normal business hours: Tel: +31 (0) 202014995

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Acetone

Pentane

2-methoxy-1-methylethyl acetate

- **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

H315 Causes skin irritation.

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- H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
- P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 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.
 P260 Do not breathe mist/vapours/spray.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280 Wear protective gloves / eye protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P403 Store in a well-ventilated place.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

EUH208 Contains Fatty acids, C18-unsatd., trimers compds. with oleylamine. May produce an allergic reaction.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**· **Description:** -· **Dangerous components:**

EC number: 926-141-6 Reg.nr.: 01-2119456620-43	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics Asp. Tox. 1, H304, EUH066	25-<50%
EC number: 919-857-5 Reg.nr.: 01-2119463258-33	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336, EUH066	25-<50%
CAS: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49	Acetone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	10-<25%
CAS: 109-66-0 EINECS: 203-692-4 Reg.nr.: 01-2119459286-30	Pentane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336, EUH066	10-<25%
CAS: 124-38-9 EINECS: 204-696-9	Carbon dioxide Press. Gas (Liq.), H280	2,5-<10%

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CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate Consisting of: 70657-70-4 2-methoxypropyl acetate (<0,3%) Flam. Liq. 3, H226; STOT SE 3, H336	2,5-<10%
CAS: 95-38-5 EINECS: 202-414-9 Reg.nr.: 01-2119777867-13	2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol STOT RE 2, H373; Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1); Acute Tox. 4, H302	1-<2,5%
EC number: 918-481-9 Reg.nr.: 01-2119457273-39	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclic, <2% aromatics. Asp. Tox. 1, H304, EUH066	0,1-<1%
CAS: 147900-93-4 EC number: 604-612-4 Reg.nr.: 01-2119971821-33	Fatty acids, C18-unsatd., trimers compds. with oleylamine STOT RE 2, H373; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Sens. 1, H317 ATE: ATE oral: 500 mg/kg	≥0,1-<0,25%

Additional information:

Aerosols and containers fitted with a solid atomizer containing substances or mixtures classified as hazardous by aspiration shall not be labelled for that hazard.

The text of the hazard statements mentioned here can be found in chapter 16.

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

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**

Water haze

Fire-extinguishing powder

Carbon dioxide

Alcohol resistant foam

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

5.3 Advice for firefighters

· **Protective equipment:** Mount respiratory protective device.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:**
Observe official regulations on storing packagings with pressurised containers.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **Storage class:** 2 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

RCP-TGG (Germany) | Short-term value: 1200 mg/m³, 165 ppm

67-64-1 Acetone

AGW (Germany) | Long-term value: 1200 mg/m³, 500 ppm
2(I);AGS, DFG, EU, Y

109-66-0 Pentane

AGW (Germany) | Long-term value: 3000 mg/m³, 1000 ppm
2(II);DFG, EU, Y

124-38-9 Carbon dioxide

AGW (Germany) | Long-term value: 9100 mg/m³, 5000 ppm
2(II);DFG, EU

108-65-6 2-methoxy-1-methylethyl acetate

AGW (Germany) | Long-term value: 270 mg/m³, 50 ppm
1(I);DFG, EU, Y

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclic, <2% aromatics.

TLV (Germany) | Short-term value: 1200, 184

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· DNELs		
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics		
Oral	DNEL Long term-systemic	125 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	125 mg/kg bw/day (Consumer)
		208 mg/kg bw/day (Worker)
Inhalative	DNEL Long term-systemic	185 mg/m ³ (Consumer)
		871 mg/m ³ (Worker)
67-64-1 Acetone		
Oral	DNEL Long term-systemic	62 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	62 mg/kg bw/day (Consumer)
		186 mg/kg bw/day (Worker)
Inhalative	DNEL Acute-local	2420 mg/m ³ (Worker)
	DNEL Long term-systemic	200 mg/m ³ (Consumer)
		1210 mg/m ³ (Worker)
109-66-0 Pentane		
Oral	DNEL Long term-systemic	214 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	214 mg/kg bw/day (Consumer)
		432 mg/kg bw/day (Worker)
Inhalative	DNEL Long term-systemic	643 mg/m ³ (Consumer)
		3000 mg/m ³ (Worker)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	DNEL Long term-systemic	36 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	320 mg/kg bw/day (Consumer)
		796 mg/kg bw/day (Worker)
Inhalative	DNEL Acute-local	550 mg/m ³ (Worker)
	DNEL Long term-systemic	33 mg/m ³ (Consumer)
		275 mg/m ³ (Worker)
	DNEL Long term-local	33 mg/m ³ (Consumer)
95-38-5 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol		
Dermal	DNEL Long term-systemic	0,06 mg/kg bw/day (Worker)
	DNEL Long term-local	2 mg/kg bw/day (Worker)
Inhalative	DNEL Aigu-systémique	14 mg/m ³ (Worker)
	DNEL Long term-systemic	0,46 mg/m ³ (Worker)

· PNECs	
67-64-1 Acetone	
PNEC Marine water	1,06 mg/l (Undefined)
PNEC Freshwater sediment	30,4 mg/l(dry weight) (Undefined)
PNEC Soil	29,5 mg/kg (Undefined)
PNEC Marine water sediment	3,04 mg/l(dry weight) (Undefined)
108-65-6 2-methoxy-1-methylethyl acetate	
PNEC Freshwater	0,635 mg/l (Undefined)
PNEC Marine water	0,0635 mg/l (Undefined)
PNEC Freshwater sediment	3,29 mg/l(dry weight) (Undefined)
PNEC Intermittent release	6,35 (Undefined)
PNEC Soil	0,29 mg/kg (Undefined)
PNEC Sewage Treatment Plant	100 mg/l (Undefined)

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PNEC Marine water sediment	0,329 mg/l(dry weight) (Undefind)
95-38-5 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	
PNEC Freshwater	0,00003 mg/l (Undefind)
PNEC Marine water	0,000003 mg/l (Undefind)
PNEC Freshwater sediment	0,376 mg/l(dry weight) (Undefind)
PNEC Sewage Treatment Plant	0,27 mg/l (Undefind)
PNEC Marine water sediment	0,0376 mg/l(dry weight) (Undefind)

· **Ingredients with biological limit values:**

67-64-1 Acetone

BGW (Germany)	50 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: Aceton
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· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

General ventilation

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A2/P2

· **Hand protection**



Protective gloves

Solvent resistant gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

Recommended thickness of the material: $\geq 0,5$ mm

· **Penetration time of glove material**

For continuous contact we recommend gloves with breakthrough time of at least 240 minutes, with the preference given to a breakthrough time greater than 480 minutes. For short-term or splash guard we recommend the same. We are aware that suitable gloves that offer this level of protection may not be available. In that case, a shorter breakthrough time are acceptable as long as the procedures governing maintenance and timely replacement are followed. The thickness of the gloves is not a good measure of the resistance of the gloves against a chemical substance, because this depends on the exact composition of the material from which the gloves are made.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye/face protection

Safety glasses



Tightly sealed goggles

· Body protection:

Use protective suit. (EN-13034/6)

Fully skin-covering anti-static, chemical- and oil-resistant clothing and safety shoes are recommended. (EN1149; EN340&EN ISO 13688; EN13034-6).

· Environmental exposure controls Use an appropriate container to avoid environmental pollution.**SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Physical state**

Aerosol

· Colour:

According to product specification

· Odour:

Characteristic

· Odour threshold:

Not determined.

· Melting point/freezing point:

Undetermined.

· Boiling point or initial boiling point and boiling range

36 °C (109-66-0 Pentane)

· Flammability

Not applicable.

· Lower and upper explosion limit**· Lower:**

0,5 Vol %

· Upper:

13 Vol %

· Flash point:

-35 °C

· Ignition Temperature

>200 °C

· pH

Mixture is non-polar/aprotic.

· Viscosity:**· Kinematic viscosity**

Not determined.

· Dynamic:

Not determined

· Solubility**· water:**

Not miscible or difficult to mix.

· Partition coefficient n-octanol/water (log value)

Not determined.

· Vapour pressure at 20 °C:

5500 hPa

· Vapor Pressure at 50 °C:

8100 hPa

· Density and/or relative density**· Density at 20 °C:**0,806 g/cm³**· Relative density**

Not determined.

· Vapour density

Not determined.

· 9.2 Other information**· Form:**

Aerosol

· Important information on protection of health and environment, and on safety.**· Ignition temperature:**

Product is not selfigniting.

· Explosive properties:

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Organic solvents:

88,5 %

· Solids content:

3,2 %

· Evaporation rate

Not applicable.

· Information with regard to physical hazard classes**· Explosives**

Void

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· Flammable gases	Void
· Aerosols	Extremely flammable aerosol. Pressurised container: May burst if heated.
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	122073 mg/kg (Rat)
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Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics

Oral	LD50	>5000 mg/kg (Rat)
Dermal	LD50	>5000 mg/kg (Rabbit)
Inhalative	LC50 (8h)	>5000 mg/m ³ (Rat) (Acute Inhalation Toxicity)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Oral	LD50	>5000 mg/kg (Rat) (Acute Oral Toxicity)
Dermal	LD50	3160 mg/kg (Rabbit) (Acute Dermal Toxicity)
Inhalative	LC50 (4h)	>4951 mg/l (Rat)
	LC50 (4h)	4951 mg/m ³ (Rat)

67-64-1 Acetone

Oral	LD50	5800 mg/kg (Rat) (Acute Oral Toxicity)
	ATE	5800 mg/kg (Rat)
Dermal	LD50	7800 mg/kg (Rabbit)
	ATE	20000 mg/kg (not defined)

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Inhalative	LC50 (4h)	>15800 mg/kg (Rabbit)
	ATE	>20 mg/l (Rat)
		76 mg/l, 4h (Rat)
109-66-0 Pentane		
Oral	LD50	>5000 mg/kg (Rat)
108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	6190 mg/kg (Rat)
Dermal	LD50	>2000 mg/kg (Rat)
		>5000 mg/kg (Rabbit)
Inhalative	LCL0	>23,5 mg/m3 (Rat)
95-38-5 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol		
Oral	LD50	1265 mg/kg (Rat)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

11.2 Information on other hazards**· Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information**· 12.1 Toxicity****· Aquatic toxicity:****Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics**

EL0 (48h)	1000 mg/l (Daphnia magna)
EL0 (72h)	1000 mg/l (Pseudokirchneriella subcapitata)
LL0 (96h)	1000 mg/l (Onc)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

EL0 (48h)	1000 mg/l (Daphnia magna)
NOELR (72h)	100 mg/l (Pseudokirchneriella subcapitata)
EL50 (72h)	>1000 mg/l (Pseudokirchneriella subcapitata)
LL50 (96h)	>1000 mg/l (Onc)

67-64-1 Acetone

EC50	8800 mg/l (Daphnia magna)
	8300 mg/l (Fish)

109-66-0 Pentane

NOEC (72h)	7,51 mg/l (Pseudokirchneriella subcapitata)
EC50 (72h)	10,7 mg/l (Pseudokirchneriella subcapitata)
LC50 (96h)	4,26 mg/l (Oncorhynchus mykiss)
EC50 (48h)	2,7 mg/l (Daphnia magna)

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108-65-6 2-methoxy-1-methylethyl acetate

EC50 (72h) (static)	>1000 mg/l (Selenastrum capricornatum) (Freshwater Alga and Cyanobacteria, Growth Inh.test)
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LC50 (96h) (static)	134 mg/l (Oncorhynchus mykiss) (Fish, Acute Toxicity Test)
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95-38-5 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol

EC50 (72h)	0,03 mg/l (Desmodesmus subspicatus)
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LC50 (96h)	0,3 mg/l (Brachydanio rerio)
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EC50 (48h)	0,136 mg/l (Daphnia magna)
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- **12.2 Persistence and degradability** Not easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Harmful to aquatic organisms

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP3	Flammable
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HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
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HP14	Ecotoxic
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- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information· **14.1 UN number or ID number**

· ADR, ADN, IMDG, IATA	UN1950
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· **14.2 UN proper shipping name**

· ADR, ADN	UN1950 AEROSOLS
· IMDG	AEROSOLS
· IATA	AEROSOLS, flammable

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· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 2 5F Gases.
· **Label** 2.1

· **ADN**

· **ADN/R Class:** 2 5F

· **IMDG, IATA**



· **Class** 2.1 Gases.
· **Label** 2.1

· **14.4 Packing group**

· **ADR, IMDG, IATA** Void

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Warning: Gases.

· **Hazard identification number (Kemler code):**

-

· **EMS Number:**

F-D,S-U

· **Segregation groups**

(SGG18) Alkalis

· **Stowage Code**

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

· **Segregation Code**

SG69 For AEROSOLS with a maximum capacity of 1 litre:

Segregation as for class 9. Stow "separated from" class 1 except for division 1.4.

For AEROSOLS with a capacity above 1 litre:

Segregation as for the appropriate subdivision of class 2.

For WASTE AEROSOLS:

Segregation as for the appropriate subdivision of class 2.

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **Transport category**

2

· **Tunnel restriction code**

D

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

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Safety data sheet

according to 1907/2006/EC, Article 31 (2020/878)

Printing date: 21.11.2023

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· UN "Model Regulation":

UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P3b FLAMMABLE AEROSOLS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

67-64-1 Acetone

· Regulation (EC) No 273/2004 on drug precursors

67-64-1	Acetone	3
120-57-0	piperonal	1

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

67-64-1	Acetone	3
120-57-0	piperonal	1

· National regulations:

· Technical instructions (air):

Class	Share in %
NK	75-<100

- Waterhazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.
- VOC-CH 88,54 %
- VOC-EU 713,5 g/l
- Danish MAL Code 3-4
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- 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.
- H317 May cause an allergic skin reaction.

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Safety data sheet

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- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.

- **Classification according to Regulation (EC) No 1272/2008**

Physical and chemical properties: The classification is based on the results of the mixtures tested. Health hazards, Environmental hazards: The method of classification of mixtures based on the constituents of the mixture (sum formula).

- **Contact: G Groot**

- **Version number of previous version: 31**

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
 MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 ATE: Acute toxicity estimate values
 Aerosol 1: Aerosols – Category 1
 Press. Gas (Liq.): Gases under pressure – Liquefied gas
 Flam. Liq. 2: Flammable liquids – Category 2
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Skin Sens. 1: Skin sensitisation – Category 1
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

DE-EN