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 Revision date / version: 22.10.2015 / 0033  
 Replacing version dated / version: 21.08.2015 / 0032  
 Valid from: 22.10.2015  
 PDF print date: 09.11.2015  
 Marine Diesel Protect 500 ml  
 Art.: 25001

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

**Marine Diesel Protect 500 ml**  
**Art.: 25001**

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

**Relevant identified uses of the substance or mixture:**

Additives  
 Biocide

#### **Uses advised against:**

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

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LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany  
 Phone: (+49) 0731-1420-0, Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

**Emergency information services / official advisory body:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (LMR)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) 1272/2008 (CLP)**

Hazard class	Hazard category	Hazard statement
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.
Skin Corr.	1C	H314-Causes severe skin burns and eye damage.

#### 2.2 Label elements

**Labeling according to Regulation (EC) 1272/2008 (CLP)**



Danger

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H304-May be fatal if swallowed and enters airways. H411-Toxic to aquatic life with long lasting effects. H314-Causes severe skin burns and eye damage.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.  
 P260-Do not breathe vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves/protective clothing and eye protection/face protection.  
 P301+P310+P331-IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P315-Get immediate medical advice/attention.  
 P405-Store locked up.  
 P501-Dispose of contents/container to special waste collection point.

EUH044-Risk of explosion if heated under confinement.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics  
 3,3'-Methylenebis[5-methyloxazolidine]

## 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

When using: development of flammable vapour/air mixture possible.

Product can compose a film on the water surface, which can prevent oxygen exchange.

## SECTION 3: Composition/information on ingredients

### 3.1 Substance

n.a.

### 3.2 Mixture

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	
Registration number (REACH)	01-2119457273-39-XXXX
Index	---
EINECS, ELINCS, NLP	918-481-9 (REACH-IT List.No.)
CAS	---
content %	20-50
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304
2-Ethylhexylnitrate	
Registration number (REACH)	01-2119539586-27-XXXX
Index	---
EINECS, ELINCS, NLP	248-363-6
CAS	27247-96-7
content %	25-30
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Aquatic Chronic 2, H411
3,3'-Methylenebis[5-methyloxazolidine]	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	266-235-8
CAS	66204-44-2
content %	10-<25

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<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1C, H314
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<b>Butanedioic acid, polyisobutylene derivatives</b>	
<b>Registration number (REACH)</b>	--
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	-
<b>CAS</b>	---
<b>content %</b>	1-5
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Eye Irrit. 2, H319

<b>2-Ethylhexanol</b>	
<b>Registration number (REACH)</b>	01-2119487289-20-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	203-234-3
<b>CAS</b>	104-76-7
<b>content %</b>	1-5
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
 The substances named in this section are given with their actual, appropriate classification!  
 For substances that are listed in appendix VI, table 3.1/3.2 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.  
 If, for example, the note P is applied for a hydrocarbon then this has already been taken into account for the classification named here.  
 Quote: "Note P - The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (EINECS No 200-753-7)."  
 Article 4 of the regulation (EC) no. 1272/2008 (CLP regulation) was also observed and taken into account for the classification named here.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### Inhalation

Remove person from danger area.  
 Supply person with fresh air and consult doctor according to symptoms.  
 If the person is unconscious, place in a stable side position and consult a doctor.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eye contact

Remove contact lenses.  
 Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### Ingestion

Rinse the mouth thoroughly with water.  
 Do not induce vomiting - give copious water to drink. Consult doctor immediately.  
 In case of vomiting, keep head low so that the stomach content does not reach the lungs.  
 Danger of aspiration

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

Corrosive burns on skin as well as mucous membrane possible.

Necrosis  
 Risk of serious damage to eyes.  
 Danger of blindness  
 Ingestion:  
 Pain in the mouth and throat  
 Oesophageal perforation  
 Gastric perforation  
 Methaemoglobin formation  
 Danger of aspiration

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Oedema of the lungs

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

There should be an eyewash station and safety shower located near the area of use.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

CO<sub>2</sub>  
 Extinction powder  
 Foam

##### Unsuitable extinguishing media

High volume water jet

#### 5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon  
 Oxides of nitrogen  
 Hydrocarbons  
 Toxic pyrolysis products.  
 Flammable vapour/air mixtures

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

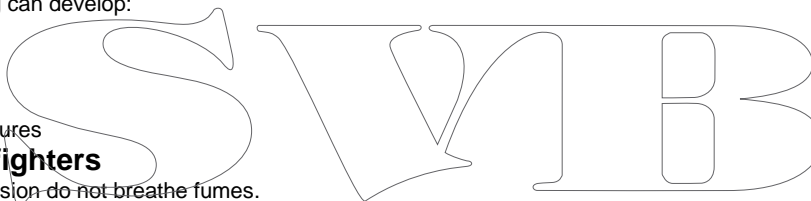
Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.



### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

If applicable, caution - risk of slipping.

#### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

#### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

#### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

### SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

#### 7.1 Precautions for safe handling

##### 7.1.1 General recommendations

Ensure good ventilation.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Avoid inhalation, and contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

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Observe directions on label and instructions for use.  
 Use working methods according to operating instructions.

### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.  
 Store product closed and only in original packing.  
 Not to be stored in gangways or stair wells.  
 Solvent resistant floor  
 Do not store with oxidizing agents.  
 Store in a well ventilated place.  
 Protect from direct sunlight and warming.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):  
 800 mg/m<sup>3</sup>

Chemical Name	Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Content %:20-50
WEL-TWA: 800 mg/m <sup>3</sup>	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 2/a (81 03 581) - Draeger - Hydrocarbons 0,1%/c (81 03 571) - Compur - KITA-187 S (551 174)	
BMGV: ---	Other information: (WEL acc. to RCP-method, EH40)	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

\*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

2-Ethylhexylnitrate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,35	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,044	mg/cm <sup>2</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,52	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,087	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,025	mg/kg bw/day	
Consumer	Human - dermal	Long term, local effects	DNEL	0,022	mg/cm <sup>2</sup>	
	Environment - freshwater		PNEC	0,8	µg/l	
	Environment - marine		PNEC	0,08	µg/l	
	Environment - sediment		PNEC	0,00074	mg/kg dw	

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	Environment - soil		PNEC	0,00019 1	mg/kg dw	
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2-Ethylhexanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - inhalation	Short term, local effects	DNEL	106,4	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	23	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	53,2	mg/m <sup>3</sup>	
Consumer	Human - inhalation	Short term, local effects	DNEL	53,2	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	11,4	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	2,3	mg/m <sup>3</sup>	
Consumer	Human - oral	Short term, systemic effects	DNEL	1,1	mg/kg bw/day	
	Environment - freshwater		PNEC	0,017	mg/l	
	Environment - marine		PNEC	0,0017	mg/l	
	Environment - sporadic (intermittent) release		PNEC	0,17	mg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		DNEL	0,28	mg/kg dw	
	Environment - sediment, marine		PNEC	0,028	mg/kg dw	
	Environment - soil		PNEC	0,047	mg/kg dw	
	Environment - oral (animal feed)		PNEC	55	mg/kg feed	

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.  
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.  
Applies only if maximum permissible exposure values are listed here.

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.  
Wash hands before breaks and at end of work.  
Keep away from food, drink and animal feedingstuffs.  
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:  
Tight fitting protective goggles with side protection (EN 166).  
If applicable  
Face protection (EN 166)

Skin protection - Hand protection:  
Chemical resistant protective gloves (EN 374).  
If applicable  
Protective Viton® / fluoroelastomer gloves (EN 374)  
Protective nitrile gloves (EN 374)  
Protective Neoprene® / polychloroprene gloves (EN 374).  
Minimum layer thickness in mm:

0,5  
Permeation time (penetration time) in minutes:

>= 120  
The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.  
The recommended maximum wearing time is 50% of breakthrough time.

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Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

At high concentrations:

Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Brown, Clear
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	63 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Vapours heavier than air.
Density:	0,895 g/ml (15°C)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	<7 mm <sup>2</sup> /s
Explosive properties:	Not determined
Oxidising properties:	No

### 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

## SECTION 10: Stability and reactivity

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## 10.1 Reactivity

The product has not been tested.

## 10.2 Chemical stability

Stable with proper storage and handling.

## 10.3 Possibility of hazardous reactions

Risk of explosion if heated under confinement.

## 10.4 Conditions to avoid

Heating, open flame, ignition sources

## 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

Reducing agent

## 10.6 Hazardous decomposition products

No decomposition when used as directed.

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by dermal route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value, Vapours
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			calculated value, Aerosol
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

### Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>4951	mg/m3	Rat		Vapours
Aspiration hazard:						Yes
Other information:						Repeated exposure may cause skin dryness or cracking.

### 2-Ethylhexylnitrate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						Experiences on persons., Harmful
Acute toxicity, by oral route:	LD50	>9640	mg/kg	Rat		

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Acute toxicity, by dermal route:						Experiences on persons., Harmful
Acute toxicity, by dermal route:	LDLo	4820	mg/kg	Rabbit		
Acute toxicity, by inhalation:						Experiences on persons., Harmful
Acute toxicity, by inhalation:	LCLo	>4,6	mg/l/1h	Rat		Mist
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:					OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:				Salmonella typhimurium	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:	NOAEL	100	mg/kg		OECD 421 (Reproduction/Developmental Toxicity Screening Test)	
Reproductive toxicity:	NOAEL	20	mg/kg bw/d			Negative
Reproductive toxicity:	NOAEL	20	mg/kg bw/d		OECD 421 (Reproduction/Developmental Toxicity Screening Test)	

### 3,3'-Methylenebis[5-methyloxazolidine]

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	900	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	1200	mg/kg	Rat		
Skin corrosion/irritation:						Corrosive
Serious eye damage/irritation:						Corrosive
Respiratory or skin sensitisation:						Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	No

### 2-Ethylhexanol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2049	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	> 3000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	2,7	mg/l/4h			Aerosol
Skin corrosion/irritation:				Rabbit		Irritant
Serious eye damage/irritation:				Rabbit		Irritant
Respiratory or skin sensitisation:						No (skin contact)
Carcinogenicity:	NOAEL	750	mg/kg bw/d			
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	200	mg/kg bw/d	Mouse		
Symptoms:						unconsciousness, drop in blood pressure, vomiting, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	638,4	mg/m3			

## SECTION 12: Ecological information

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Possibly more information on environmental effects, see Section 2.1 (classification).

See section 2.

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							Isolate as much as possible with an oil separator.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.
Other information:							According to the recipe, contains no AOX.

**Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LL50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	EL50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	EL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Other organisms:	EL50	48h	>1000	mg/l	Tetrahymena pyriformis		

**2-Ethylhexylnitrate**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	1,88	mg/l	Brachydanio rerio		
Toxicity to daphnia:	EC50	48h	>12,6	mg/l	Daphnia magna		
Toxicity to algae:	EC50	72h	>12,6	mg/l			
Persistence and degradability:		28d	0	%			Not readily biodegradable
Persistence and degradability:		15d					A notable biological accumulation potential has to be expected (LogPow > 3).
Bioaccumulative potential:	BCF		1332				
Bioaccumulative potential:	Log Pow		3,74-5,24				
Bioaccumulative potential:	Log Pow		3,74-5,24				A notable biological accumulation potential has to be expected (LogPow > 3).
Mobility in soil:	Log Koc		3,8				
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:	AOX		0	%			No
Water solubility:							Slight

**3,3'-Methylenebis[5-methyloxazolidine]**

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	50	mg/l	Brachydanio rerio		
Toxicity to daphnia:	EC50	48h	37,9	mg/l	Daphnia magna		
Toxicity to algae:	EC50	72h	5,7	mg/l	Scenedesmus subspicatus		
Persistence and degradability:			>60	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Biodegradable
Bioaccumulative potential:	Log Pow		-0,11			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

2-Ethylhexanol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	17,1	mg/l	Leuciscus idus		
Toxicity to daphnia:	EC50	48h	39	mg/l	Daphnia magna		
Toxicity to algae:	EC50	72h	11,5	mg/l	Scenedesmus subspicatus		
Persistence and degradability:		5d	> 95	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		25,33				
Bioaccumulative potential:	Log Kow		2,9				
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.  
 EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

13 07 03 other fuels (including mixtures)

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Implement substance recycling.

E.g. suitable incineration plant.

#### For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

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Dispose of packaging that cannot be cleaned in the same manner as the substance.

## SECTION 14: Transport information

### General statements

UN number: 1760

### Transport by road/by rail (ADR/RID)

UN proper shipping name: CORROSIVE LIQUID, N.O.S. (3,3'-METHYLENEBIS[5-METHYLOXAZOLIDINE],2-ETHYLHEXYL NITRATE)  
 Transport hazard class(es): 8  
 Packing group: II  
 Classification code: C9  
 LQ (ADR 2015): 1 L  
 Environmental hazards: environmentally hazardous  
 Tunnel restriction code: E



### Transport by sea (IMDG-code)

UN proper shipping name: CORROSIVE LIQUID, N.O.S. (3,3'-METHYLENEBIS[5-METHYLOXAZOLIDINE],2-ETHYLHEXYL NITRATE)  
 Transport hazard class(es): 8  
 Packing group: II  
 EmS: F-A, S-B  
 Marine Pollutant: Yes  
 Environmental hazards: environmentally hazardous



### Transport by air (IATA)

UN proper shipping name: Corrosive liquid, n.o.s. (3,3'-METHYLENEBIS[5-METHYLOXAZOLIDINE],2-ETHYLHEXYL NITRATE)  
 Transport hazard class(es): 8  
 Packing group: II  
 Environmental hazards: Not applicable



### Special precautions for user

Persons employed in transporting dangerous goods must be trained.  
 All persons involved in transporting must observe safety regulations.  
 Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.  
 Minimum amount regulations have not been taken into account.  
 Danger code and packing code on request.  
 Comply with special provisions.

## SECTION 15: Regulatory information

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

For classification and labelling see Section 2.

Additional data acc. to Art. 69 (2), Regulation (EU) No 528/2012

(Biocide products):

The identity of every active substance and its concentration in metric units:

3,3'-Methylenebis[5-methyloxazolidine]

18 g/100 g

The uses:

Preservation

Biocidal product authorisation number (Regulation (EU) No. 528/2012):

n.d.a.

Registration number BAuA (Federal Institute for Occupational Health and Safety, Germany):

baua:Reg.-Nr. N-36764 (Art. 1008), N-36765 (Art. 5150, 5121, 5157), N-63563 (Art. 25000, 25002)

For classification and labelling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

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Observe youth employment law (German regulation).  
 Observe law on protection of expectant mothers (German regulation).  
 Directive 2010/75/EU (VOC): 621 g/l

## 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 2, 3, 8, 11, 12  
 These details refer to the product as it is delivered.  
 Employee instruction/training in handling hazardous materials is required.  
 Employee training in handling dangerous goods is required.

## Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Asp. Tox. 1, H304	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.
Skin Corr. 1C, H314	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H314 Causes severe skin burns and eye damage.  
 H302 Harmful if swallowed.  
 H304 May be fatal if swallowed and enters airways.  
 H312 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H335 May cause respiratory irritation.  
 H411 Toxic to aquatic life with long lasting effects.  
 Observe Regulation (EU) No 528/2012 concerning the placing of biocidal products on the market.

Asp. Tox. — Aspiration hazard  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Skin Corr. — Skin corrosion  
 Acute Tox. — Acute toxicity - oral  
 Acute Tox. — Acute toxicity - dermal  
 Acute Tox. — Acute toxicity - inhalation  
 Eye Irrit. — Eye irritation  
 Skin Irrit. — Skin irritation  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

## Any abbreviations and acronyms used in this document:

AC Article Categories  
 acc., acc. to according, according to  
 ACGIH American Conference of Governmental Industrial Hygienists  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOEL Acceptable Operator Exposure Level  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)  
 BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF	Bioconcentration factor
BGV	Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT	Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV	Biological monitoring guidance value (EH40, UK)
BOD	Biochemical oxygen demand
BSEF	Bromine Science and Environmental Forum
bw	body weight
CAS	Chemical Abstracts Service
CEC	Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO	Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC	Collaborative International Pesticides Analytical Council
CLP	Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR	carcinogenic, mutagenic, reproductive toxic
COD	Chemical oxygen demand
CTFA	Cosmetic, Toiletry, and Fragrance Association
DMEL	Derived Minimum Effect Level
DNEL	Derived No Effect Level
DOC	Dissolved organic carbon
DT50	Dwell Time - 50% reduction of start concentration
DVS	Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw	dry weight
e.g.	for example (abbreviation of Latin 'exempli gratia'), for instance
EC	European Community
ECHA	European Chemicals Agency
EEA	European Economic Area
EEC	European Economic Community
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EN	European Norms
EPA	United States Environmental Protection Agency (United States of America)
ERC	Environmental Release Categories
ES	Exposure scenario
etc.	et cetera
EU	European Union
EWG	European Waste Catalogue
Fax.	Fax number
gen.	general
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GWP	Global warming potential
HET-CAM	Hen's Egg Test - Chorionallantoic Membrane
HGWP	Halocarbon Global Warming Potential
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
IBC (Code)	International Bulk Chemical (Code)
IC	Inhibitory concentration
IMDG-code	International Maritime Code for Dangerous Goods
incl.	including, inclusive
IUCLID	International Uniform Chemical Information Database
LC	lethal concentration
LC50	lethal concentration 50 percent kill
LCLo	lowest published lethal concentration
LD	Lethal Dose of a chemical
LD50	Lethal Dose, 50% kill
LDLo	Lethal Dose Low
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
LQ	Limited Quantities
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.a.	not applicable
n.av.	not available

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n.c. not checked  
 n.d.a. no data available  
 NIOSH National Institute of Occupational Safety and Health (United States of America)  
 NOAEC No Observed Adverse Effective Concentration  
 NOAEL No Observed Adverse Effect Level  
 NOEC No Observed Effect Concentration  
 NOEL No Observed Effect Level  
 ODP Ozone Depletion Potential  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 PAH polycyclic aromatic hydrocarbon  
 PBT persistent, bioaccumulative and toxic  
 PC Chemical product category  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 POCP Photochemical ozone creation potential  
 ppm parts per million  
 PROC Process category  
 PTFE Polytetrafluorethylene  
 REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
 REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
 RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
 SADT Self-Accelerating Decomposition Temperature  
 SAR Structure Activity Relationship  
 SU Sector of use  
 SVHC Substances of Very High Concern  
 Tel. Telephone  
 ThOD Theoretical oxygen demand  
 TOC Total organic carbon  
 TRGS Technische Regeln für Gefahrstoffe (= Technical Regulations for Hazardous Substances)  
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
 VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
 VOC Volatile organic compounds  
 vPvB very persistent and very bioaccumulative  
 WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
 WHO World Health Organization  
 wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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