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Revision date / version: 02.02.2018 / 0018  
Replacing version dated / version: 07.12.2016 / 0017  
Valid from: 02.02.2018  
PDF print date: 05.02.2018  
MOS2 ANTIF.F.GEARS 50 g  
Art.: 2510

## 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

**MOS2 ANTIF.F.GEARS 50 g**  
**Art.: 2510**

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

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

Additives

**Uses advised against:**

No information available at present.

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

GB

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
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

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



H411-Toxic to aquatic life with long lasting effects.

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P273-Avoid release to the environment.  
 P501-Dispose of contents / container to special waste collection point.

EUH208-Contains Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivatives, Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). May produce an allergic reaction.

### 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 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

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

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	Substance with specific conc. limit(s) acc. to REACH-registration
Registration number (REACH)	01-2119493620-38-XXXX
Index	---
EINECS, ELINCS, NLP	931-384-6 (REACH-IT List-No.)
CAS	---
content %	2,5-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Chronic 2, H411
(Z)-octadec-9-enylamine	
Registration number (REACH)	---
Index	612-283-00-3
EINECS, ELINCS, NLP	204-015-5
CAS	112-90-3
content %	0,25-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Asp. Tox. 1, H304 STOT SE 3, H335 STOT RE 2, H373 (gastrointestinal tract, liver, immune system) Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10) Eye Dam. 1, H318
Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivatives	SVHC-substance
Registration number (REACH)	01-2119971727-23-XXXX
Index	---
EINECS, ELINCS, NLP	939-460-0 (REACH-IT List-No.)
CAS	---
content %	0,1-<1

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

Flam. Liq. 3, H226  
Skin Irrit. 2, H315  
Eye Dam. 1, H318  
Skin Sens. 1B, H317  
Aquatic Chronic 3, H412

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.  
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 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.

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

First-aiders should ensure they are protected!  
Never pour anything into the mouth of an unconscious person!

**Inhalation**

Remove person from danger area.  
Supply person with fresh air and consult doctor according to symptoms.  
Respiratory arrest - Artificial respiration apparatus necessary.

**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.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

Headaches

Dizziness

Nausea

Fatigue

Irritant to mucosa of the nose and throat

Allergic reaction

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.

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

CO<sub>2</sub>

Dry extinguisher

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 sulphur

Oxides of phosphorus

Aldehydes

Toxic pyrolysis products.

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Danger of bursting (explosion) when heated  
In case of spreading near the ground, flashback to distance sources of ignition is possible.

### **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**

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) 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.  
Avoid contact with eyes or skin.  
Do not heat to temperatures close to flash point.  
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
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.  
Do not store with oxidizing agents.  
Solvent resistant floor  
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**

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GB	Chemical Name	Oil mist, mineral	Content %:
	WEL-TWA: 5 mg/m3 (ACGIH)	WEL-STEL: 10 mg/m3 (ACGIH)	---
	Monitoring procedures:		
		- Draeger - Oil 10/a-P (67 28 371)	
		- Draeger - Oil Mist 1/a (67 33 031)	
	BMGV: ---	Other information: ---	
GB	Chemical Name	Molybdenum disulphide	Content %:
	WEL-TWA: 10 mg/m3 (molybdenum insoluble compounds, as Mo)	WEL-STEL: 20 mg/m3 (molybdenum insoluble compounds, as Mo)	---
	Monitoring procedures: ---		
	BMGV: ---	Other information: ---	
GB	Chemical Name	Molybdenum compounds, insoluble	Content %:
	WEL-TWA: 10 mg/m3 (as Mo)	WEL-STEL: 20 mg/m3 (as Mo)	---
	Monitoring procedures: ---		
	BMGV: ---	Other information: ---	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).  
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).  
 (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | 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.

## 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.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042.

BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 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 (EN 166) with side protection, with danger of projections.

Skin protection - Hand protection:

Protective gloves, oil resistant (EN 374)

If applicable

Protective nitrile gloves (EN 374)

Permeation time (penetration time) in minutes:

>= 60

Minimum layer thickness in mm:

0,4

Protective hand cream recommended.

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.

Skin protection - Other:

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

**Respiratory protection:**  
 Normally not necessary.  
 If OES or MEL is exceeded.  
 Filter A2 P2 (EN 14387), code colour brown, white  
 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:	Black
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	>200 °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):	Not determined
Density:	1 g/ml (20°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	~380 mPas
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

### 10.1 Reactivity

The product has not been tested.

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## 10.2 Chemical stability

Stable with proper storage and handling.

## 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

## 10.4 Conditions to avoid

Heating, open flame, ignition sources

## 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

## 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:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						Not irritant
Respiratory or skin sensitisation:						No (skin contact)
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.

### Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit		Corrosive
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Sensitising

### (Z)-octadec-9-enylamine

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1689	mg/kg	Rat		
Skin corrosion/irritation:						Corrosive
Serious eye damage/irritation:						Risk of serious damage to eyes.

### Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivatives

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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	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit		Irritant
Serious eye damage/irritation:				Rabbit		Eye Dam. 1

Molybdenum disulphide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	>2820	mg/m <sup>3</sup> /4h	Rat		
Skin corrosion/irritation:				Rabbit		Not irritant
Serious eye damage/irritation:				Rabbit		Mild irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Respiratory or skin sensitisation:						No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						mucous membrane irritation

## SECTION 12: Ecological information

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
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							Mechanical precipitation possible. n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.
Other information:							According to the recipe, contains no AOX.

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOEC/NOEL	96h	3,2	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	~91,4	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	96h	6,4	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	



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12.1. Toxicity to algae:	NOEC/NOEL	96h	1,7	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	7,4	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Toxicity to bacteria:	EC50	3h	~2433	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

**(Z)-octadec-9-enylamine**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	0,11	mg/l			
12.1. Toxicity to daphnia:	EC50	48h	0,011	mg/l			
12.1. Toxicity to algae:	EC50	96h	0,03	mg/l			
12.2. Persistence and degradability:		28d	44-66				
12.3. Bioaccumulative potential:			2,7				0,1d

**Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivatives**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	26	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	75	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	LC0	72h	25-71	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:	DOC	28d	17,4	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
12.3. Bioaccumulative potential:	Log Kow		>9,4				

**Molybdenum disulphide**

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	781-1339	mg/l	Oncorhynchus mykiss		Analogous conclusion(mg Mo/L)
12.1. Toxicity to daphnia:	LC50	48h	1680,4-1776,6	mg/l	Daphnia magna		Analogous conclusion(mg Mo/L)
12.1. Toxicity to daphnia:	LC50	48h	2729,4	mg/l	Daphnia magna		Analogous conclusion(mg Mo/L)
12.1. Toxicity to daphnia:	LC50	48h	2847,5	mg/l	Daphnia magna		Analogous conclusion(mg Mo/L)

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12.1. Toxicity to daphnia:	LC50	48h	130,9	mg/l	Daphnia magna		Analogous conclusion(mg Mo/L)
12.1. Toxicity to daphnia:	LC50	48h	1005,5-1024,6	mg/l	Ceriodaphnia spec.		Analogous conclusion(mg Mo/L)
12.1. Toxicity to algae:	ErC50	72h	289,2-390,9	mg/l	Pseudokirchneriella subcapitata		Analogous conclusion(mg Mo/L)
12.1. Toxicity to fish:	LC50	96h	609-681,4	mg/l	Pimephales promelas		Analogous conclusion(mg Mo/L)
12.1. Toxicity to fish:	LC50	96h	7600	mg/l	Oncorhynchus mykiss		Analogous conclusion(mg Mo/L)
Water solubility:			<0,1	mg/l			@20°C

## 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 02 05 mineral-based non-chlorinated engine, gear and lubricating oils

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.

Untampered packaging can be recycled.

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

Do not perforate, cut up or weld uncleaned container.

## SECTION 14: Transport information

### General statements

14.1. UN number: 3082

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

14.2. UN proper shipping name:

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (OLEYLAMINE)

14.3. Transport hazard class(es):

9

14.4. Packing group:

III

Classification code:

M6

LQ:

5 L

14.5. Environmental hazards:

environmentally hazardous

Tunnel restriction code:

-



#### Transport by sea (IMDG-code)

14.2. UN proper shipping name:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (OLEYLAMINE)

14.3. Transport hazard class(es):

9

14.4. Packing group:

III

EmS:

F-A, S-F

Marine Pollutant:

Yes



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14.5. Environmental hazards: environmentally hazardous

**Transport by air (IATA)**

14.2. UN proper shipping name:  
 Environmentally hazardous substance, liquid, n.o.s. (OLEYLAMINE)

14.3. Transport hazard class(es): 9

14.4. Packing group: III

14.5. Environmental hazards: environmentally hazardous



**14.6. 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.

**14.7. 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**

Observe restrictions:  
 Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E2		200	500

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC):

**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections: 3, 4, 11, 12, 15  
 Employee training in handling dangerous goods is required.  
 These details refer to the product as it is delivered.  
 Employee instruction/training in handling hazardous materials 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
Aquatic Chronic 2, H411	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).  
 H226 Flammable liquid and vapour.

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H317 May cause an allergic skin reaction.  
 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.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H335 May cause respiratory irritation.  
 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.  
 H412 Harmful to aquatic life with long lasting effects.

Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Acute Tox. — Acute toxicity - oral  
 Skin Sens. — Skin sensitization  
 Eye Dam. — Serious eye damage  
 Asp. Tox. — Aspiration hazard  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation  
 STOT RE — Specific target organ toxicity - repeated exposure  
 Skin Corr. — Skin corrosion  
 Aquatic Acute — Hazardous to the aquatic environment - acute  
 Flam. Liq. — Flammable liquid  
 Skin Irrit. — Skin 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

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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  
 EWC 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  
 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)

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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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