

Safety data sheet

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

1.1. Product identifier

Code: U01010
Product name: LUBROREFRIGERANTE PERFORMA DUE

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

Intended use: Metalworking fluid, water based, boron and biocides free.
Uses advised against: Uses other than those referred as recommended.

1.3. Details of the supplier of the safety data sheet

Name: CENTRO DISTRIBUZIONE UTENSILI SCPA
Full address: Via Delle Gerole, 19
District and Country: 20867 Caponago (MB) - Italia

tel. +39 02 95746081

fax +39 02 95745182

e-mail address of the competent person

responsible for the Safety Data Sheet

Product distribution by:

info@cdu.net

Centro Distribuzione Utensili Scpa

1.4. Emergency telephone number

For urgent inquiries refer to

+39 0297240527 during office hour 8.30-12.30 - 13.30-17.30

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: WARNING

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.

Precautionary statements:

P264 Wash thoroughly the skin after handling.
P280 Wear protective gloves / eye protection / face protection.
P337+P313 If eye irritation persists: Get medical advice / attention.

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2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients**3.1. Substances**

Information not relevant

3.2. Mixtures

Contains:

Identification	X = Conc. %	Classification 1272/2008 (CLP)
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC		
CAS 64742-53-6	48,8 ≤ x < 53,8	Asp. Tox. 1 H304, Note H L
EC 265-156-6		
INDEX 649-466-00-2		
Reg. no. 01-2119480375-34		
SULFONIC ACIDS, PETROLEUM, SODIUM SALTS		
CAS 68608-26-4	5,10 ≤ x < 7,10	Eye Irrit. 2 H319
EC 271-781-5		
INDEX -		
Reg. no. 01-2119527859-22		
FATTY ACIDS, TALL-OIL, POTASSIUM SALTS		
CAS 61790-44-1	3,40 ≤ x < 5,40	Eye Irrit. 2 H319
EC 263-136-1		
INDEX -		
2-METHYLPENTANE-2,4-DIOL		
CAS 107-41-5	1,00 ≤ x < 3,50	Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 203-489-0		
INDEX 603-053-00-3		
2-PHENOXYETHANOL		
CAS 122-99-6	1,00 ≤ x < 3,20	Acute Tox. 4 H302, Eye Irrit. 2 H319
EC 204-589-7		
INDEX 603-098-00-9		
FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH ACRYLIC ACID		
CAS -	1,00 ≤ x < 2,65	Skin Corr. 1C H314
EC 939-424-4		
INDEX -		
Reg. no. 01-2119972299-21		
2-(2-BUTOXYETHOXY)ETHANOL		
CAS 112-34-5	0,50 ≤ x < 1,80	Eye Irrit. 2 H319
EC 203-961-6		
INDEX 603-096-00-8		
Reg. no. 01-2119475104-44		
(Z)-N-METHYL-N-(1-OXO-9-OCTADECENYL)GLYCINE		
CAS 110-25-8	0,10 ≤ x < 0,55	Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=1
EC 203-749-3		
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ETHANEDIOL

CAS 107-21-1

0,05 ≤ x < 0,12

Acute Tox. 4 H302, STOT RE
2 H373

EC 203-473-3

INDEX 603-027-00-1

Reg. no. 01-2119456816-28

PYRIDINE-2-THIOL 1-OXIDE, SODIUM SALT

CAS 3811-73-2

0,01 ≤ x < 0,045

Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Irrit.
2 H319, Skin Irrit. 2 H315, Aquatic Acute 1 H400 M=100

EC 223-296-5

INDEX -

Reg. no. 01-2119493385-28

CALCIUM HYDROXIDE

CAS 1305-62-0

0,01 ≤ x < 0,023

Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335

EC 215-137-3

INDEX -

Reg. no. 01-2119475151-45

The full wording of hazard (H) phrases is given in section 16 of the sheet.

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

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available.

SECTION 5. Firefighting measures**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

LUBROREFRIGERANTE PERFORMA DUE**SECTION 6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 10

7.3. Specific end use(s)

Metalworking fluid, water based, boron and biocides free.

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

DEU	Deutschland	MAK-und BAT-Werte-Liste 2012
DNK	Danmark	Graensevaerdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2015
FIN	Suomi	HTP-arvot 2012. Haitallisiksi tunnetut pitoisuudet - Sosiaali- ja terveystieteiden tutkimuskeskus julkaisu 2012:5
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Databank of the social and Economic Council of Netherlands (SER) Values, AF 2011:18
POL	Polska	ROZPORZĄDZENIE MINISTRA PRACY I POLITYKI SPOŁECZNEJ z dnia 16 grudnia 2011r
PRT	Portugal	Ministério da Economia e do Emprego Consolida as prescrições mínimas em matéria de protecção dos trabalhadores contra os riscos para a segurança e a saúde devido à exposição a agentes químicos no trabalho - Diaro da Republica I 26; 2012-02-06
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016

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DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC
Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation							5,4 mg/m ³	VND

2-METHYLPENTANE-2,4-DIOL
Threshold Limit Value

Type	Country	TWA/8h		STEL/15min	
		mg/m ³	ppm	mg/m ³	ppm
MAK	DEU	49	10	98	20
TLV	DNK	125	25		
VLA	ESP			123	25
HTP	FIN	120	25	200	40
VLEP	FRA			125	25
WEL	GBR	123	25	123	25
NDS	POL			120 (C)	
TLV-ACGIH				121 (C)	25 (C)

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,429	mg/l
Normal value in marine water	0,0429	mg/l
Normal value for fresh water sediment	1,79	mg/kg
Normal value for marine water sediment	0,179	mg/kg
Normal value for water, intermittent release	4,29	mg/l
Normal value of STP microorganisms	20	mg/l
Normal value for the terrestrial compartment	0,11	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	1 mg/kg bw/d				
Inhalation	49 mg/m ³	VND	25 mg/m ³	3,5 mg/m ³	98 mg/m ³	VND	49 mg/m ³	14 mg/m ³
Skin			VND	1 mg/kg bw/d			VND	2 mg/kg bw/d

2-PHENOXYETHANOL
Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
AGW	DEU	110	20	220	40	SKIN
MAK	DEU	110	20	220	40	SKIN
HTP	FIN	110	20	290	50	SKIN
NDS	POL	230				

FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH ACRYLIC ACID
Predicted no-effect concentration - PNEC

Normal value in fresh water	0,015	mg/l
Normal value in marine water	0,0015	mg/l
Normal value for fresh water sediment	25	mg/kg
Normal value for marine water sediment	2,5	mg/kg
Normal value of STP microorganisms	9800	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation							NPI	3,19 mg/m ³
Skin							NPI	0,9 mg/kg bw/d

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2-(2-BUTOXYETHOXY)ETHANOL
Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	67	10	100,5	15	
MAK	DEU	67	10	100,5	15	
TLV	DNK	67,5	10			
VLA	ESP	67,5	10	101,2	15	
HTP	FIN	68	10			
VLEP	ITA	67,5	10	101,2	15	
OEL	NLD	50		100		SKIN
NDS	POL	67		100		
VLE	PRT	67,5	10	101,2	15	
OEL	EU	67,5	10	101,2	15	
TLV-ACGIH		66	10			

Predicted no-effect concentration - PNEC

Normal value in fresh water	1,1	mg/l
Normal value in marine water	0,11	mg/l
Normal value for fresh water sediment	4,4	mg/kg
Normal value for marine water sediment	0,44	mg/kg
Normal value for water, intermittent release	11	mg/l
Normal value of STP microorganisms	200	mg/l
Normal value for the food chain (secondary poisoning)	56	mg/kg
Normal value for the terrestrial compartment	0,32	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	5 mg/kg				
Inhalation	60,7 mg/m3	VND	40,5 mg/m3	40,5 mg/m3	101,2 mg/m3	VND	67,5 mg/m3	67,5 mg/m3
Skin			VND	50 mg/kg			VND	83 mg/kg

ETHANEDIOL
Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	26	10	52	20	SKIN
MAK	DEU	26	10	52	20	SKIN
TLV	DNK	26	10			SKIN
VLA	ESP	52	20	104	40	SKIN
HTP	FIN	50	20	100	40	SKIN
VLEP	FRA	52	20	104	40	SKIN
WEL	GBR	52	20	104	40	
VLEP	ITA	52	20	104	40	SKIN
OEL	NLD	52		104		SKIN
NDS	POL	15		20		
VLE	PRT	52	20	104	40	SKIN
OEL	EU	52	20	104	40	SKIN
TLV-ACGIH				100 (C)		

Predicted no-effect concentration - PNEC

Normal value in fresh water	10	mg/l
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Normal value in marine water	1	mg/l
Normal value for fresh water sediment	37	mg/kg
Normal value for marine water sediment	3,7	mg/kg
Normal value for water, intermittent release	10	mg/l
Normal value of STP microorganisms	199,5	mg/l
Normal value for the terrestrial compartment	1,53	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation	VND	7 mg/m3					35 mg/m3	VND
Skin			VND	53 mg/kg			VND	106 mg/kg

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Appearance	Clear liquid
Colour	Dark emerald green
Odour	almond
Odour threshold	Not available
pH	9,25 - 9,50 Sol. 5%
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	> 100 °C
Evaporation Rate	Not available
Flammability of solids and gases	Not applicable
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Vapour pressure	Not available

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Vapour density	Not available
Relative density	0,950 - 0,960 Kg/l
Solubility	water emulsifiable
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	>20,5 mm ² /sec (40°C)
Explosive properties	not applicable
Oxidising properties	Not available
9.2. Other information	
VOC (Directive 2010/75/EC) :	3,32 %
VOC (volatile carbon) :	2,27 %

SECTION 10. Stability and reactivity**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

2-METHYLPENTANE-2,4-DIOL

Decomposes under the effect of heat.

2-PHENOXYETHANOL

In water at 1% reacts to form a weak acid (pH=6).

ETHANEDIOL

In the air absorbs moisture. Decomposes at temperatures above 200°C/392°F.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

2-(2-BUTOXYETHOXY)ETHANOL

May react with: oxidising substances. May form peroxides with: oxygen. Develops hydrogen on contact with: aluminium. May form explosive mixtures with: air.

ETHANEDIOL

Risk of explosion on contact with: perchloric acid. May react dangerously with: chlorosulphuric acid, sodium hydroxide, sulphuric acid, phosphorus pentasulphide, chromium (III) oxide, chromyl chloride, potassium perchlorate, potassium dichromate, sodium peroxide, aluminium. Forms explosive mixtures with: air.

CALCIUM HYDROXIDE

Reacts violently developing heat on contact with: acids.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC

Avoid exposure to: sources of heat.

2-METHYLPENTANE-2,4-DIOL

Avoid exposure to: sources of heat, naked flames.

ETHANEDIOL

Avoid exposure to: sources of heat, naked flames.

CALCIUM HYDROXIDE

Avoid exposure to: air, moisture.

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10.5. Incompatible materials

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC
Keep away from: oxidising agents.

2-METHYLPENTANE-2,4-DIOL

Incompatible with: strong acids, strong oxidants. Compatible materials: carbon steel, aluminium.

2-PHENOXYETHANOL

Incompatible with: strong oxidants.

2-(2-BUTOXYETHOXY)ETHANOL

Incompatible with: oxidising substances, strong acids, alkaline metals.

CALCIUM HYDROXIDE

May react dangerously if exposed to: acids, aluminium, brass.

10.6. Hazardous decomposition products

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC
When heated to decomposition releases: carbon monoxide, sulphuric acid, sulphur oxides.

2-(2-BUTOXYETHOXY)ETHANOL

May develop: hydrogen.

ETHANEDIOL

May develop: hydroxyacetaldehyde, glyoxal, acetaldehyde, methane, carbon monoxide, hydrogen.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effectsMetabolism, toxicokinetics, mechanism of action and other information

Information not available.

Information on likely routes of exposure

2-(2-BUTOXYETHOXY)ETHANOL

WORKERS: inhalation; contact with the skin.

ETHANEDIOL

WORKERS: inhalation; contact with the skin.

POPULATION: inhalation of ambient air; contact with the skin of products containing the substance.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

2-(2-BUTOXYETHOXY)ETHANOL

May be absorbed by inhalation, ingestion and skin contact; is irritating for the skin and especially for the eyes. May cause damage to the spleen. At room temperature the danger of inhalation is unlikely, due to the low vapour pressure of the substance.

ETHANEDIOL

Ingestion initially stimulates the central nervous system; later replaced by a phase of depression. There may be kidney damage, with anuria and uremia. Over-exposure symptoms are: vomiting, drowsiness, difficulty in breathing, convulsions. The lethal dose for humans is approx. 1.4 ml/kg.

Interactive effects

Information not available.

LUBROREFRIGERANTE PERFORMA DUEACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture: Not classified (no significant component)
LC50 (Inhalation - mists / powders) of the mixture: Not classified (no significant component)
LD50 (Oral) of the mixture: >2000 mg/kg
LD50 (Dermal) of the mixture: Not classified (no significant component)

SULFONIC ACIDS, PETROLEUM, SODIUM SALTS

LD50 (Oral) > 2000 mg/kg Rat

(Z)-N-METHYL-N-(1-OXO-9-OCTADECENYL)GLYCINE

LD50 (Oral) > 5000 mg/kg Rat
LC50 (Inhalation) 1,8 mg/l/4h Rat

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC

LD50 (Oral) > 5000 mg/kg Rat - API 1986a
LD50 (Dermal) > 5000 mg/kg Rabbit - API 1982
LC50 (Inhalation) > 5,53 mg/l/4h Rat - EMBSI 1988a

2-PHENOXYETHANOL

LD50 (Oral) 1850 mg/kg bw Rat
LD50 (Dermal) > 5000 mg/kg bw Rabbit
LC50 (Inhalation) > 1000 mg/m3 Rat

2-(2-BUTOXYETHOXY)ETHANOL

LD50 (Oral) 2410 mg/kg Mouse (OECD - guidelines 401)
LD50 (Dermal) 2764 mg/kg Rabbit (OECD - guidelines 402)
LC50 (Inhalation) > 29 ppm/2h Rat (IRT)

ETHANEDIOL

LD50 (Oral) > 1600 mg/kg Human being. European Union has classified the substance as "harmful".
LD50 (Dermal) > 3500 mg/kg Rat
LC50 (Inhalation) > 2,5 mg/l Rat

CALCIUM HYDROXIDE

LD50 (Oral) > 2000 mg/kg Rat
LD50 (Dermal) > 2500 mg/kg Rabbit

FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH ACRYLIC ACID

LD50 (Oral) 6176 mg/kg Rat

PYRIDINE-2-THIOL 1-OXIDE, SODIUM SALT

LD50 (Oral) 1500 mg/kg bw Rat
LD50 (Dermal) 1800 mg/kg bw Rabbit
LC50 (Inhalation) 1,08 mg/l Rat

SKIN CORROSION / IRRITATION

Causes skin irritation.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation.

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class.

ETHANEDIOL

Available studies have shown no carcinogenic potential. In a carcinogenicity study lasting two years, carried out by the US National Toxicology Program (NTP), in which ethylene glycol was administered in the feed, "no evidence of carcinogenic activity" in male and female B6C3F1 mice was observed (NTP, 1993).

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REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: >20,5 mm²/sec (40°C).

SECTION 12. Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

12.1. Toxicity**(Z)-N-METHYL-N-(1-OXO-9-OCTADECENYL)GLYCINE**

LC50 - for Fish	10 mg/l Fish
EC50 - for Crustacea	0,43 mg/l/48h Daphnia
EC50 - for Algae / Aquatic Plants	6,3 mg/l/72h Algae

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC

LC50 - for Fish	> 100 mg/l/96h
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2-PHENOXYETHANOL

LC50 - for Fish	344 mg/l/96h Pimephales promelas
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 500 mg/l/72h Desmodesmus subspicatus

2-(2-BUTOXYETHOXY)ETHANOL

LC50 - for Fish	1300 mg/l/96h Lepomis macrochirus
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Scenedesmus subspicatus

ETHANEDIOL

LC50 - for Fish	72860 mg/l/96h Pimephales promelas
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
Chronic NOEC for Fish	15380 mg/l Pimephales promelas
Chronic NOEC for Crustacea	8590 mg/l Ceriodaphnia sp.

2-METHYLPENTANE-2,4-DIOL

LC50 - for Fish	8690 mg/l/96h Pimephales promelas
EC50 - for Algae / Aquatic Plants	> 429 mg/l/72h Pseudokirchnerella subcapitata

CALCIUM HYDROXIDE

LC50 - for Fish	457 mg/l/96h Gasterosteus aculeatus
EC50 - for Crustacea	158 mg/l/48h Crangon septemspinosa
EC50 - for Algae / Aquatic Plants	184,57 mg/l/72h Pseudokirchneriella subcapitata

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FATTY ACIDS, TALL-OIL, REACTION PRODUCTS WITH ACRYLIC ACID

LC50 - for Fish	15 mg/l/96h
EC50 - for Crustacea	22,5 mg/l/48h Daphnia
EC50 - for Algae / Aquatic Plants	62,9 mg/l/72h Algae

PYRIDINE-2-THIOL 1-OXIDE, SODIUM SALT

LC50 - for Fish	0,007 mg/l/96h
EC50 - for Algae / Aquatic Plants	0,009 mg/l/72h Selenastrum capricornutum

12.2. Persistence and degradability

(Z)-N-METHYL-N-(1-OXO-9-OCTADECENYL)GLYCINE

Rapidly biodegradable

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC

Solubility in water Insoluble

Entirely biodegradable

2-PHENOXYETHANOL

Solubility in water 28600 mg/l

Rapidly biodegradable

2-(2-BUTOXYETHOXY)ETHANOL

Solubility in water Miscible

Rapidly biodegradable

ETHANEDIOL

Solubility in water 1000 - 10000 mg/l

Rapidly biodegradable

2-METHYLPENTANE-2,4-DIOL

Solubility in water > 10000 mg/l

Rapidly biodegradable

CALCIUM HYDROXIDE

Solubility in water 1184 mg/l

12.3. Bioaccumulative potential

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC

BCF < 500

2-PHENOXYETHANOL

Partition coefficient: n-octanol/water 1,2
BCF 0,3493

2-(2-BUTOXYETHOXY)ETHANOL

Partition coefficient: n-octanol/water 1 Log Kow 20°C - pH 7

ETHANEDIOL

Partition coefficient: n-octanol/water -1,36

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2-METHYLPENTANE-2,4-DIOL
Partition coefficient: n-octanol/water < -0,14

12.4. Mobility in soil

2-PHENOXYETHANOL
Partition coefficient: soil/water 1,6

2-(2-BUTOXYETHOXY)ETHANOL
Partition coefficient: soil/water 1

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information**14.1. UN number**

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

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

Information not relevant

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EC: None

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Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3

Contained substance

Point 55 2-(2-BUTOXYETHOXY)ETHANOL Reg. no.: 01-2119475104-44

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None.

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

German regulation on the classification of substances hazardous to water (VwVwS 2005)

WGK 2: Hazard to waters

15.2. Chemical safety assessment

No chemical safety assessment for the mixture was carried out.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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H315	Causes skin irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EU) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15.