



VALEO SERVICE SAS  
MEAO

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734 -**  
**PROTECTIV 112 : 820872**

Page n. 1/14

## Safety Data Sheet

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

#### 1.1. Product identifier

Product name

**PROTECTIV 100: ANTIFREEZE ORGANIC YP**  
**819011 - 819012 - 819013 - 819014 - 819015 - 819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112: ANTIFREEZE ORGANIC YP**  
**820872**

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

Intended use

**ENGINE COOLANT (for B2C)**

#### Identified Uses

De-icing and anti-icing applications

Industrial



Professional



Consumer



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

Name

**Valeo Service Africa & Overseas**

Full address

**70 Rue Pleyel**

District and Country

**93285 St Denis**

**France**

**Tel. +33(0)149453232**

e-mail address of the competent person

responsible for the Safety Data Sheet

vsao.contact.mailbox@valeo.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to

**+33(0)149453232 (business hours)**

### 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 (EU) Regulation 2015/830. 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:

Acute toxicity, category 4

H302

Specific target organ toxicity - repeated exposure, category 2

H373

Harmful if swallowed.

May cause damage to organs through prolonged or repeated exposure.





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Revision nr. 1

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**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 3/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

**ETHANEDIOL**

CAS 107-21-1

95 ≤ x < 99

Acute Tox. 4 H302, STOT RE 2 H373

EC 203-473-3

INDEX 603-027-00-1

Reg. no. 01-2119456816-28-xxxx

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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

### 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.



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

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**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 4/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

**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).

## 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. 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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 5/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

Regulatory References:

CZE	Ceská Republika	Nariadení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci
DEU	Deutschland	TRGS 900 (Fassung 4.11.2016) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
DNK	Danmark	Graenseværdier per stoffer og materialer
ESP	España	INSHT - Límites de exposición profesional para agentes químicos en España 2017
FRA	France	JORF n°0109 du 10 mai 2012 page 8773 texte n° 102
GBR	United Kingdom	EH40/2005 Workplace exposure limits
GRC	Ελλάδα	ΕΦΗΜΕΡΙΣ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 19 - 9 Φεβρουαρίου 2012
HRV	Hrvatska	NN13/09 - Ministarstvo gospodarstva, rada i poduzetništva
HUN	Magyarország	50/2011. (XI. 22.) NGM rendelet a munkahelyek kémiai biztonságáról
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
SWE	Sverige	Occupational Exposure Limit Values, AF 2011:18
TUR	Türkiye	2000/39/EC sayılı Direktifin ekidir
EU	OEL EU	Directive (EU) 2017/2398; 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 2019

**ETHANEDIOL**

**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	50		100		SKIN
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
VLEP	FRA	52	20	104	40	SKIN
WEL	GBR	52	20	104	40	
TLV	GRC	125	50	125	50	
GVI	HRV	52	20	104	40	SKIN
AK	HUN	52		104		
VLEP	ITA	52	20	104	40	SKIN
OEL	NLD	52		104		SKIN
MAK	SWE	25	10	50	20	SKIN
ESD	TUR	52	20	104	40	SKIN
OEL	EU	52	20	104	40	SKIN
TLV-ACGIH				100 (C)		
<b>Predicted no-effect concentration - PNEC</b>						
Normal value in fresh water				10		mg/l
Normal value in marine water				1		mg/l
Normal value for fresh water sediment				20,9		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



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -  
819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 6/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

**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			7 mg/m3	VND			35 mg/m3	VND
Skin			VND	53 mg/kg/d			VND	106 mg/kg/d

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.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

**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 Regulation 2016/425 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).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

**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**



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -  
819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 7/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

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	liquid
Colour	yellow or pink
Odour	characteristic
Odour threshold	Not available
pH	7,5 - 10
Melting point/ freezing point	-40 °C
Initial boiling point	> 165 °C
Boiling range	Not available
Flash point	> 125 °C
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	4,9 % (V/V)
Upper explosive limit	14,6 % (V/V)
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,110 - 1,140
Solubility	soluble
Partition coefficient: n-octanol/water	-1,93
Auto-ignition temperature	> 400 °C
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

### 9.2. Other information

VOC (Directive 2010/75/EC) :	0
VOC (volatile carbon) :	0

## SECTION 10. Stability and reactivity

### 10.1. Reactivity



VALEO SERVICE SAS  
MEAO

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 8/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

The product may react exothermically on contact with strong oxidising or reducing agents, strong acids or bases.

**10.2. Chemical stability**

Excessively high temperatures can cause thermal decomposition.

ETHANEDIOL

Reacts with strong oxidising agents.

**10.3. Possibility of hazardous reactions**

See paragraph 10.1.

**10.4. Conditions to avoid**

Avoid overheating.

ETHANEDIOL

ETHANEDIOL: avoid exposure to sources of heat and naked flames.

**10.5. Incompatible materials**

Oxidising or reducing agents. Strong acids or bases.

Do not store in zinc-coated.

**10.6. Hazardous decomposition products**

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

ETHANEDIOL

ETHANEDIOL: hydroxyacetaldehyde, glyoxal, acetaldehyde, methane, formaldehyde, 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 effects**





**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 9/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

**ETHANEDIOL**

ETHANEDIOL: following ingestion it initially stimulates the CNS; later on depression results. Renal damage with anuria and uremia may occur. Symptoms of over exposure are: vomiting, somnolence, difficulty in breathing, convulsions. The lethal dose in man is approximately 1.4 l/kg. The way of entry is inhalation and ingestion.

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:  
Not classified (no significant component)  
LD50 (Oral) of the mixture:  
303,13 mg/kg  
LD50 (Dermal) of the mixture:  
Not classified (no significant component)

**ETHANEDIOL**

LD50 (Oral) > 300 mg/kg

LD50 (Dermal) > 5000 mg/kg Rabbit

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION



VALEO SERVICE SAS  
MEAO

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 10/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

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

**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**

May cause damage to organs

**ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class

## SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

### 12.1. Toxicity

ETHANEDIOL

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

Chronic NOEC for Fish > 100 mg/l

Chronic NOEC for Crustacea > 100 mg/l

### 12.2. Persistence and degradability

ETHANEDIOL

Rapidly degradable



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -  
819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 11/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

**12.3. Bioaccumulative potential**

ETHANEDIOL

Partition coefficient: n-octanol/water

-1,93

**12.4. Mobility in soil**

ETHANEDIOL

ETHANEDIOL: very mobile in soil.

**12.5. Results of PBT and vPvB assessment**

ETHANEDIOL

ETHANEDIOL: is not considered to be PBT or vPvB.

**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.

**CONTAMINATED PACKAGING**

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

## SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

**14.1. UN number**

Not applicable

**14.2. UN proper shipping name**

Not applicable



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -**  
**819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 12/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

**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

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

Product

Point 3

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%.



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

Dated 18/04/2018

First compilation

Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -  
819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 13/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

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.

**15.2. Chemical safety assessment**

A chemical safety assessment has been performed for the following contained substances

ETHANEDIOL

**SECTION 16. Other information**

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

<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>H302</b>	Harmful if swallowed.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.

**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



**VALEO SERVICE SAS  
MEAO**

Revision nr. 1

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Printed on 19/07/2019

**PROTECTIV 100**  
**819011 - 819012 - 819013 - 819014 - 819015 -  
819016 - 819017 - 819018 - 820734**  
**PROTECTIV 112 : 820872**

Page n. 14/14

**Safety Data Sheet**

According to Annex II to REACH - Regulation 2015/830

- 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 (EC) 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
  12. Regulation (EU) 2016/1179 (IX Atp. CLP)
  13. Regulation (EU) 2017/776 (X Atp. CLP)
  14. Regulation (EU) 2018/669 (XI Atp. CLP)
  15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
- 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.