



## SAFETY DATA SHEET

In compliance with EC Regulations No.: 1907/2006, 830/2015 and 1272/2008 (CLP).

Date last modified: 12 December 2019 - version 6.0

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

#### 1.1 Product Identifier

**Product Name:** MARICLEAN-POL

**Product Code #:** 833020 (30 lt)

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

**Intended Use:** Industrial applications; Cleaning agent for machinery, equipment & cargo holds and tanks.

**Uses advised against:** This product is not recommended for any industrial, professional or consumer use other than the Intended Uses above and the instructions written in this Safety Data Sheet.

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

##### **Company/undertaking identification**

##### **Supplier/Manufacturer:**

Marichem Marigases Hellas SA  
Sfaktirias 64,  
185 45 Piraeus,  
Greece

Tel. No.: ++30 210 4148800

Fax No.: ++30 210 4133985

<http://www.marichem-marigases.com>

**e-mail:** [mail@marichem-marigases.com](mailto:mail@marichem-marigases.com)

#### 1.4 Emergency telephone number

Tel. No.: ++30 210 4148800 (including working hours)

##### Emergency Information:

Inside U.S. and Canada: (800)-424-9300 (CHEMTREC)

Outside U.S. and Canada: 1-703-527-3887 (CHEMTREC)

National Emergency Centre (Greece): ++30 210 7793777

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the mixture

Classification under EC 1272/2008 regulation - GHS classification.

Acute Toxicity - Oral: Acute Tox. 5  
Sensitisation, Skin: 1B  
Serious Eye Damage/Eye Irritation: 1

**SIGNAL WORD: WARNING**



**Hazard Statement(s):**

H303 May be harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.

### 2.2 Label Elements

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

The substance is classified and labelled according to the CLP Regulation.

**Hazard Pictograms**



**GHS07**

**Signal Word: WARNING**

**Hazard Statements**

H303 May be harmful if swallowed.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.

**Precautionary Statements**

**Prevention:**

P102 Keep out of reach of children.  
P280 Wear protective gloves/eye protection.

**Response:**

P301 + P330 IF SWALLOWED: rinse mouth.  
P302+352 IF ON SKIN: Wash with soap and water  
P305+351 IF IN EYES: Rinse continuously with water for several minutes.

**Storage:**

P404 Store in a closed container.

P405 Store locked up.

**2.3 Other hazards**

PBT Substances: None

P Substances: None

Other Hazards

No other hazards.

**Product classification and labelling according to Directive 67/548/EEC, European [Dangerous Preparations Directive](#) (1999/45/EC), European Regulation 648/2004 and their amendments.**

Symbol: Xi, Irritant

**(Xi) Irritant**

**R-phrases:** R41: Risk of serious damage to eyes.  
R43: May cause sensitization by skin contact.

**S-phrases:** S2: Keep out of the reach of children.  
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S37: Wear suitable gloves.  
S39: Wear eye/face protection.

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
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**3.1 Chemical Composition:**

Ingredients	CAS Number	Proportion	Hazard Code(s)*
Sodium Laureth Sulfate	68891-38-3	1% - 10%	H315; H318; H412.
Linear Alkyl Benzene Sulphonic Acid	85117-49-3	1% - 5%	H302; H314.
5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion)	55965-84-9	<0.0003%	H301; H311; H331; H314; H317; H400.
Ingredients that do not contribute to the classification of the product	-	85% - 97%	-

\*See section 16 for the full text of the Hazard Code(s) declared above.

Occupational Exposure Limits, if available, are listed in section 8.

## **4. FIRST AID MEASURES**

### **4.1. Description of first aid measures**

Remove contaminated clothing. If danger of loss of consciousness, place patient in recovery position and transport accordingly. Apply artificial respiration if necessary. First aid personnel should pay attention to their own safety.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Hazards: Skin resorption hazard.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

## **5. FIRE-FIGHTING MEASURES**

### **5.1. Extinguishing media**

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

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

Cool endangered containers with water-spray.

### **5.3. Advice for fire-fighters**

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

## **6. ACCIDENTAL RELEASE MEASURES**

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

Avoid inhalation. Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

### **6.2. Environmental precautions**

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

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

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

### **6.4. Reference to other sections**

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

## **7. HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

Ensure thorough ventilation of stores and work areas.

Prevent contact with air/oxygen (formation of peroxide).

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

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

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

**Components with workplace control parameters**

**Name of Substance: Sodium Laureth Sulfate**

**Europe:** No exposure limit value known.

**Germany:** No exposure limit value known.

**Spain:** No exposure limit value known.

### **Recommended monitoring**

If this substance contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following:

European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy).

European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents).

European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### **DNELs/DMELs**

<b>Type</b>	<b>Exposure</b>	<b>Value</b>	<b>Population</b>	<b>Effects</b>
DNEL	Long term Dermal	2750 mg/ kg bw/day	Workers	Systemic
DNEL	Long term Inhalation	175 mg/m <sup>3</sup>	Workers	Systemic
DNEL	Long term Dermal	1650 mg/ kg bw/day	Consumers	Systemic
DNEL	Long term Inhalation	52 mg/m <sup>3</sup>	Consumers	Systemic
DNEL	Long term Oral	15 mg/kg bw/day	Consumers	Systemic

### **PNECs**

<b>Compartment Detail</b>	<b>Value</b>	<b>Method Detail</b>
Fresh water	0,24 mg/l	-
Marine water	0,024 mg/l	-
Sewage Treatment Plant	10000 mg/l	Assessment Factors
Fresh water sediment	5,45 mg/kg dwt	-
Marine water sediment	0,545 mg/kg dwt	-
Soil	0,946 mg/kg dwt	-

### **Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

#### **· DNEL/DMEL**

DNEL long-term, workers, dermal: 170 mg/kg bw/day

DNEL long-term, workers, inhalation: 12 mg/m<sup>3</sup>

DNEL long-term, workers, oral: 0.85 mg/kg bw/day

DNEL long-term, consumers, dermal: 85.0 mg/kg bw/day

DNEL long-term, consumers, inhalation: 3 mg/m<sup>3</sup>

DNEL long-term, consumers, oral: 0.85 mg/kg bw/day

#### **· PNECs**

PNEC aqua (freshwater): 0.268 mg LAS/L

PNEC aqua (marine water): 0.0268 mg/L  
PNEC aqua (intermittent releases): 0.0167 mg/L  
PNEC STP: 3.43 mg/L  
PNEC sediment (freshwater): 8.1 mg/kg  
PNEC sediment (marine water): 8.1 mg/kg  
PNEC soil: 35 mg/kg

**Additional information:** The lists valid during the making were used as basis.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

No exposure limit value known.

## **8.2 Exposure Controls**

### **Appropriate engineering controls**

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

### **Individual protection measures**

#### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Eye and face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: splash goggles.

#### **Skin protection**

##### **Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): butyl rubber, Viton, nitrile rubber, neoprene.

##### **Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: overall, lab coat.

## Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: neoprene.

## Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## Remark

The penetration-time of the recommended gloves depends not only on the material. Also other factors may have influence on the penetration-time, as their thickness or the specific use or conditions (temperature). In any case, certificate materials (for example following EN 374) should be selected. Please ask your supplier, if the gloves are suitable for the intended use.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

## 9.1. Information on basic physical and chemical properties

### 9.1.1. Appearance

<b>Physical State:</b>	Liquid (viscous)
<b>Color:</b>	Light yellow
<b>Odor:</b>	Lemon scent

### 9.1.2. Basic data

<b>Boiling Point Range:</b>	90-100 °C at 20°C
<b>Solubility in water:</b>	Appreciable
<b>Flash Point:</b>	None
<b>Autoignition Temperature:</b>	None



<b>Vapour Pressure:</b>	Not available
<b>Relative vapor density (air= 1) :</b>	>1
<b>Specific Gravity:</b>	1.02 – 1.04 gr/cm <sup>3</sup> at 20°C
<b>Viscosity:</b>	3.59 cSt at 50 °C
<b>pH value:</b>	7.0 – 8.0

**9.2 Other Information:** No further relevant information available.

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Formation of flammable gases:

Remarks: Forms no flammable gases in the presence of water.

### 10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3. Possibility of hazardous reactions

Reacts with strong oxidizing agents.

### 10.4. Conditions to avoid

No special precautions other than good housekeeping of chemicals.

### 10.5. Incompatible materials

Substances to avoid: strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Name of Substance: Sodium Laureth Sulfate**

#### Acute toxicity

Result	Species	Dose	Exposure
LD50 Oral	Rat	> 2000 mg/kg	-
LD50 Dermal	Rat	> 2000 mg/kg	-
LD50 Oral	Rat	> 2000 mg/kg	-

**Conclusion/Summary:** Sub-chronic toxicity (OECD 408, 90d): no systematic or toxic effects found.

### Sensitizer

Route of Exposure	Species	Result
skin	Guinea pig	Not sensitizing

### Mutagenicity

Test	Experiment	Result
OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro. Subject: Bacteria	Negative

### Carcinogenicity

Teratogenicity /Embryotoxicity (OECD 401): no symptoms of cumulative toxicity found up to 1000 mg/kg/day.

### Potential acute health effects

**Inhalation:** May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

**Ingestion:** May cause burns to mouth, throat and stomach.

**Skin contact:** Causes skin irritation.

**Eye contact:** Causes serious eye damage.

### Name of Substance: Linear Alkyl Benzene Sulphonic Acid

#### Acute toxicity

Oral LD50 1470 mg/kg (rat) (OECD 401 (Acute oral toxicity))

Dermal LD50 >2000 mg/kg (rat) (OECD 402 (Acute dermal toxicity))

#### Primary irritant effect:

##### on the skin:

Corrosive.

Caustic effect on skin and mucous membranes.

##### on the eye:

Strong caustic effect.

**Sensitization:** The substance is not sensitising to skin.

#### Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

#### Toxicokinetics, metabolism and distribution

A series of toxicokinetic studies indicates that LAS is rapidly absorbed when the exposures are intravenous, oral or dermal, then rapidly eliminated from the body, mostly via the urine and to a lesser extent in the bile and faeces.

A dermal absorption study of a C12 LAS homologue in isolated human epidermis indicated < 1 % of the applied dose penetrated the skin in 48 hours.

LAB sulfonic Acid would be expected to show a comparable toxicokinetic profile.

#### Acute effects (acute toxicity, irritation and corrosivity)

Acute toxicity: the substance is a category 4 toxicant based on the oral results

Irritation: the substance is classified as category 1 for skin irritation and category 1 for eye irritation

Corrosivity: the substance is classified as a category 1 skin corrosive and as a Category 1 eye

irritant

**Sensitisation** Not sensitising.

**Repeated dose toxicity**

The resultant NOAEL values were 125 mg/kg bw/day, 40 mg/kg bw/d, and 85 mg/kg bw/d for the 28 day (gavage), 6 month (diet) and 9 month (drinking water) studies, respectively.

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

The substance is not carcinogenetic, mutagenic, toxic for reproduction.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

**Acute Toxicity**

LD50/LC50 values that are relevant for classification		
Oral	ATE mix	> 5000 mg/kg (rat)
Dermal	ATE mix	> 5000 mg/kg (rat)
Inhalation	ATE mix dust/mist	> 5 mg/l, 4h (rat)

**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Name of Substance: Sodium Laureth Sulfate**

Result	Species	Exposure	Test method
Acute EC50 27,7 mg/l	Algae	72 hours	OECD 201 Algae, Growth Inhibition Test
Acute EC50 7,4 mg/l	Daphnia	48 hours	OECD 202 <i>Daphnia</i> sp. Acute Immobilization Test
Acute LC50 7,1 mg/l	Fish	96 hours	OECD 203 Fish, Acute Toxicity Test
Chronic NOEC 0,95 mg/l	Algae	72 hours	OECD 201 Algae, Growth Inhibition Test

**Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

No further relevant information available.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

**Aquatic Toxicity**

EC50/48h: 0.12mg/l (Daphnia)

EC50/72h: 0.048 mg/l (Pseudokirchneriella subcapitata)

EC50/96h: 0.22 mg/l (rainbow trout)

NOEC: 0.098 mg/l (rainbow trout)

**12.2 Persistence and Degradability**

**Name of Substance: Sodium Laureth Sulfate**

Conclusion/Summary: > 90%

Readily biodegradable.

**Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

LAB Sulfonic Acid was found to be readily biodegradable in the OECD Die-Away test, with 94% biodegradability in 28 days. Therefore, LAB Sulfonic Acid is not persistent.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

Proved to be biodegradable in the simulation test OECD 301D (Closed Bottle Test), O<sub>2</sub> consumption: > 60%.

### **12.3 Bioaccumulative potential**

**Name of Substance: Sodium Laureth Sulfate**

Not available.

**Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

A flow-through fish test (OECD 305E) was conducted to assess the bioaccumulation potential of four different mixtures of LAS (read across). Results indicate BCF values ranging from 2 to 1000. Therefore, LAB Sulfonic Acid is not bioaccumulative.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

Not available.

### **12.4 Mobility in soil**

**Name of Substance: Sodium Laureth Sulfate**

Not available.

**Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

No further relevant information available.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

EC50: 7.9 mg/l (activated sludge) OECD 209.

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

**Name of Substance: Sodium Laureth Sulfate**

Not applicable.

**Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

Not applicable.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The substance does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

**12.6 Other adverse effects**

**Name of Substance: Sodium Laureth Sulfate**

No known significant effects or critical hazards.

**Name of Substance: Linear Alkyl Benzene Sulphonic Acid**

No further relevant information available.

**Name of Substance: 5-Chloro-2-methyl-2,3-dihydroisothiazol-3-one and 2-methyl-2,3-dihydroisothiazol-3-one (3:1 proportion).**

No further relevant information available.

The product is not harmful to the marine environment as per paragraphs 1.7.4 and 1.7.5. of Resolution MEPC. 219 (63) /Annex 24 - 2012 adoption of IMO's MARPOL Annex V.

**13. DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

**14. TRANSPORT INFORMATION**

14.1 Not classified as dangerous material for the transportation according to UN, IMDG, ADR/RID, U.S. D.O.T. and IATA/ICAO transportation codes.

**15. REGULATORY INFORMATION**

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

**15.2 Chemical Safety Assessment**

A CSA has been carried out for the raw materials in this product, from the raw materials manufacturers (when needed to be carried out).

## **16. OTHER INFORMATION**

### **16.1 Full text of Hazard Code(s) referred in Section 3**

H301: Toxic if swallowed.  
H302: Harmful if swallowed.  
H311: Toxic in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H331: Toxic if inhaled.  
H400: Very toxic to aquatic life.  
H412: Harmful to aquatic life with long lasting effects.

### **16.2 Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail).  
IMDG: International Maritime Code for Dangerous Goods.  
IATA: International Air Transport Association.  
ICAO: International Civil Aviation Organization.  
bw: Body weight.  
Carc.: Carcinogenicity.  
CAS number: Chemical Abstracts Service number.  
CLP: Classification Labelling Packaging Regulation.  
CSA: Chemical Safety Assessment.  
CSR: Chemical Safety Report.  
DNEL: Derived No Effect Level.  
dw: Dry weight.  
EC number: EINECS and ELINCS number.  
EC: European Commission.  
EC50: Half maximal effective concentration.  
EINECS: European Inventory of Existing Commercial Chemical Substances.  
ELINCS: European List of Notified Chemical Substances.  
EmS: Emergency Schedule.  
ERC: Environmental Release Category.  
ES: Exposure scenario.  
food: oral feed.  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals.  
Irrit.: Irritation.  
LC50: Lethal concentration, 50 %.  
LD50: Median Lethal dose.  
LOAEC: Lowest Observed Adverse Effect Concentration.  
LOAEL: Lowest Observed Adverse Effect Level.  
MK value: Maximum Concentration value.  
NCO: An international corporation that provides customer service contracting.  
NOAEC: No Observed Adverse Effect Concentration.  
NOAEL: No Observed Adverse Effect Level.  
NOEC: No Observed Effect Concentration.

OECD: Organisation for Economic Cooperation and Development.  
PBT: Persistent, Bioaccumulative and Toxic.  
PNEC: Predicted No Effect Concentration.  
PROC: Process category.  
REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals.  
Resp.: Respiratory.  
Sens.: Sensitization.  
STEL value: Short Term Exposure Limit value.  
STOT RE: Specific target organ toxicity — repeated exposure.  
STOT SE: Specific target organ toxicity — single exposure.  
STOT: Specific Target Organ Toxicity.  
STP: Sewage Treatment Plant.  
SU: Sector of use.  
Tox.: Toxicity.  
TWA value: Time Weighted Average value.  
vPvB: Very Persistent and Very Bioaccumulative.

### **16.3 Notice to reader**

All information, instructions and statements contained in this Material Safety Data Sheet are compiled in accordance with European Directives, corresponding national legislation and on the basis of information given by our suppliers.

The information disclosed in this Material Safety Data Sheet (which supersedes all previous versions) is believed to be correct, at the date of issue, to the best of our current knowledge and experience. It only relates to the specific product designated herein and it may not be valid when said product is used in combination with any other products or in any processed form, unless specified in the text. This document aims to provide the necessary health and safety information of the product and is not to be considered a warranty or quality specification. It is the responsibility of the recipient of this Material Safety Data Sheet to ensure that information given here is read and understood by all who use, handle, dispose of or in any way come in contact with the product.

Also, it is the responsibility of the user to comply with local legislation relating to safety, health, environment and waste management. Data and information provided concerning the product are informative, exclusively presented to the customer.