

## Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

#### 1.1. Product identifier

Code: **BMPS**  
Product name: **BI MORTAR PLASTER SEAL**  
UFI: **PS9E-YVJV-020K-NS78**

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

Intended use: **Cement waterproofing**

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

Name: **VOLTECO S.p.A**  
Full address: **via delle industrie 47**  
District and Country: **31050 Ponzano Veneto (TV) Italia**  
Tel.: **04229663**  
e-mail address of the competent person responsible for the Safety Data Sheet: **volteco@volteco.it**

#### 1.4. Emergency telephone number

For urgent inquiries refer to:  
**+39 06 68593726 (CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA - Roma - 00165)**  
**+39 800183459 (Az. Osp. Univ. Foggia - Foggia - 71222)**  
**+39 081 7472870 (Az. Osp. "A. Cardarelli" - Napoli - 80131)**  
**+39 06 49978000 (CAV Policlinico "Umberto I" - Roma - 161)**  
**+39 06 3054343 (CAV Policlinico "A. Gemelli" - Roma - 168)**  
**+39 055 7947819 (Az. Osp. "Careggi" U.O. Tossicologia Medica - Firenze - 50134)**  
**+39 0382 24444 (CAV Centro Nazionale di Informazione Tossicologica - Pavia - 27100)**  
**+39 02 66101029 (Osp. Niguarda Ca' Granda - Milano - 20162)**  
**+39 800883300 (Azienda Ospedaliera Papa Giovanni XXII - Bergamo - 24127)**

### 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 2020/878.

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:

Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.

#### 2.2. Label elements

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

Hazard pictograms:



## SECTION 2. Hazards identification ... / &gt;&gt;

Signal words: Danger

Hazard statements:

**H318** Causes serious eye damage.  
**H315** Causes skin irritation.  
**H335** May cause respiratory irritation.  
**H317** May cause an allergic skin reaction.

Precautionary statements:

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P280** Wear protective gloves / eye protection / face protection.  
**P310** Immediately call a POISON CENTER / doctor / . . .  
**P261** Avoid breathing dust / fume / gas / mist / vapours / spray.  
**P403+P233** Store in a well-ventilated place. Keep container tightly closed.

Contains: PORTLAND CEMENT

## 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.The product does not contain substances with endocrine disrupting properties in concentration  $\geq$  0.1%.

## SECTION 3. Composition/information on ingredients

## 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>PORTLAND CEMENT</b>		
INDEX	$24 \leq x < 29$	<b>Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1 H317</b>
EC 266-043-4		
CAS 65997-15-1		
<b>ZINCO STEARATO</b>		
INDEX	$1 \leq x < 3$	<b>Aquatic Acute 1 H400 M=1</b>
EC 209-151-9		
CAS 557-05-1		

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. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

### 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).

## SECTION 6. Accidental release measures

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

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. Use breathing equipment if powders are released into the air.

### 6.2. Environmental precautions

Avoid the formation of powder and dispersion of the product in the air.

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

Collect the leaked product and place it in containers for recovery or disposal. Make sure the leakage site is well aired. It may be advisable to wash with water any surfaces contaminated with traces of dust, without contaminating waste water.

#### PORTLAND CEMENT

##### Dry concrete

Use dry cleaning methods such as vacuum cleaners or extractors (portable industrial units, equipped with high efficiency particulate filters or equivalent techniques), which do not disperse dust into the environment. Never use compressed air.

Ensure workers wear appropriate personal protective equipment (see Section 8) and prevent the spread of cement dust.

Avoid inhaling cement dust and contact with skin.

Deposit the spilled material in containers (e.g. silos, hoppers, etc.) for future use.

##### Wet concrete

Remove the wet cement and place it in a container. Allow the material to dry and solidify before disposing of it as described in Section 13.

### 6.4. Reference to other sections

Notify the competent authorities if the product has reached waterways or if it has contaminated the ground or vegetation.

## 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. Wash hands after use.

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

Keep the product in clearly labelled containers. Store the containers sealed, in a well ventilated place, away from direct sunlight.

#### PORTLAND CEMENT

**SECTION 7. Handling and storage ... / >>**

Risk of burial: Cement can thicken or stick to the walls of the confined space in which it is stored. Concrete can cave in, collapse or fall unexpectedly. To prevent burial or suffocation, do not enter confined spaces, such as silos, containers, bulk transport trucks, or other storage containers or containers that store or contain cement, without adopting appropriate safety measures. Do not use aluminum containers for the storage or transport of wet mixtures containing cement due to the incompatibility of the materials.

**7.3. Specific end use(s)**

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters****ZINCO STEARATO****Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,0034	mg/l
Normal value in marine water	0,00034	mg/l
Normal value for fresh water sediment	0,526	mg/kg/d
Normal value for marine water sediment	0,0526	mg/kg/d
Normal value for marine water, intermittent release	0,00413	mg/l
Normal value for fresh water, intermittent release	0,000413	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
Oral				1,67 mg/kg bw/d				
Inhalation				2,9 mg/m3			16,4	16,4 mg/m3
Skin				1,67 mg/kg bw/d				4,67 mg/kg bw/d

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m<sup>3</sup>; PNOC inhalable fraction: 10 mg/m<sup>3</sup>). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

**PORTLAND CEMENT**

The time-weighted threshold limit value (TLV-TWA) adopted in working environments by the Association of American Industrial Hygienists (ACGIH) for cement is equal to 1 mg/m<sup>3</sup> (respirable fraction).

For the indication of the exposure level (DNEL = Derived no-effect level) we have:

DNEL (respirable fraction): 1 mg/m<sup>3</sup>

DNEL (skin): not applicable

DNEL (ingestion): not relevant

As regards the environmental risk assessment (PNEC = predictable no-effect concentration), we have:

PNEC (water): not applicable

PNEC (sediment): not applicable

PNEC (soil): not applicable

In relation to the possible presence of respirable free crystalline silica, the professional user must respect the professional exposure limits to respirable crystalline silica in 8 working hours (OEL (EU) equal to 0.1 mg/m<sup>3</sup> (respirable fraction, 8h) VLEP (IT) equal to 0.1 mg/m<sup>3</sup> (respirable fraction, 8h) – Annex XLIII Legislative Decree 81/2008).

The American Conference of Governmental Industrial Hygienist (ACGIH) recommends a threshold value of 0.025 mg/m<sup>3</sup>.

**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**

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

**SKIN PROTECTION**

## SECTION 8. Exposure controls/personal 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).

### RESPIRATORY PROTECTION

Use a type P filtering facemask, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment (see standard EN 149).

### ENVIRONMENTAL EXPOSURE CONTROLS

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

### PORTLAND CEMENT

General: In plants where cement is handled, transported, loaded and unloaded and stored, suitable measures must be adopted for the protection of workers and for the containment of releases into the workplaces. If possible, avoid kneeling on fresh mortar or concrete. However, if it is absolutely necessary, suitable waterproof personal protective equipment must be worn.

Do not eat, drink or smoke while handling the cement to avoid contact with your skin or mouth.

Immediately after handling/manipulating the cement or materials containing it, it is necessary to wash with neutral soap or an adequate light detergent or use moisturizing creams. Dispose of clothes contaminated, footwear, glasses, etc. and clean them completely before using them again.

#### a) Eye/face protection

Wear safety glasses or masks compliant with UNI EN 166 when handling dry cement or its wet preparations to prevent contact with eyes.

#### b) Skin protection

Use gloves with mechanical resistance to abrasion according to EN ISO 388 with nitrile or neoprene coating, preferably ¾ or totally in case of more demanding activities. In the event of possible contact with the wet mixture, use a glove with specific chemical protection according to EN ISO 374 with specific thickness and degree of permeation (in particular to alkalis) based on the type of use (immersion or possible accidental contact). Always change damaged or soaked gloves immediately. In some circumstances, such as when laying concrete or screed, waterproof trousers or knee pads are required.

#### c) Respiratory protection

When a person is potentially exposed to dust levels above the exposure limits, use appropriate respiratory protection commensurate with the level of dustiness and compliant with the relevant EN standards (for example filtering facepiece certified according to UNI EN 149).

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	powder	
Colour	grey	
Odour	not available	
Melting point / freezing point	not applicable	
Initial boiling point	not applicable	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	not applicable	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	11,4	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	2,99 g/cm <sup>3</sup>	
Relative vapour density	not available	
Particle characteristics	not available	

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Information not available

#### 9.2.2. Other safety characteristics

Information not available

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

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

#### PORTLAND CEMENT

When mixed with water, cement hardens into a stable mass that does not react with the environment.

### 10.2. Chemical stability

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

#### PORTLAND CEMENT

Concrete as it is stable for longer the more it is stored appropriately (see Section 7) and is compatible with almost all construction materials. It must be kept dry. Contact with incompatible materials must be avoided.

Wet cement is alkaline and incompatible with acids, ammonium salts, aluminum and other non-noble metals.

Cement, in contact with hydrofluoric acid, decomposes producing corrosive silicon tetrafluoride gas.

Cement reacts with water and forms silicates and calcium hydroxide. Silicates react with powerful oxidants such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride and oxygen bifluoride.

The integrity of the packaging and compliance with the storage methods mentioned in Section 7 (special closed containers, cool, dry place and absence of ventilation) are essential conditions for the maintenance of the effectiveness of the reducing agent in the storage period specified on the DDT or on the individual bag.

### 10.3. Possibility of hazardous reactions

The powders are potentially explosive when mixed with air.

#### PORTLAND CEMENT

Cement does not cause dangerous reactions

### 10.4. Conditions to avoid

Avoid environmental dust build-up.

#### PORTLAND CEMENT

Humid conditions during storage can cause lump formation and loss of product quality product.

### 10.5. Incompatible materials

#### PORTLAND CEMENT

Wet cement is alkaline and incompatible with acids, ammonium salts, aluminum and other metals not noble.

#### CARBONATO DI CALCIO

Incompatible with: acids,aluminium,magnesium.

### 10.6. Hazardous decomposition products

#### PORTLAND CEMENT

Cement does not decompose into any hazardous products.

#### CARBONATO DI CALCIO

In decomposition develops: calcium oxides.

## SECTION 11. Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### 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

**SECTION 11. Toxicological information ... / >>**

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

ZINCO STEARATO

LD50 (Dermal):	2000 mg/kg Coniglio
LD50 (Oral):	2000 mg/kg Ratto
LC50 (Inhalation vapours):	200 mg/l/1h Ratto

PORTLAND CEMENT

Acute toxicity - dermal - Limit test on rabbit, 24 hour contact, 2,000 mg/kg body weight - non-lethal. Based on available data, it does not meet the classification criteria.

Acute toxicity - inhalation - No acute inhalation toxicity observed. Based on available data, it does not meet the classification criteria.

Acute toxicity - oral - No indications of oral toxicity from studies with cement kiln dust. Based on available data, it does not meet the classification criteria

SKIN CORROSION / IRRITATION

Causes skin irritation

PORTLAND CEMENT

Cement in contact with moist skin can cause thickening, cracking and splitting of the skin. Prolonged contact in combination with existing abrasions can cause severe burns.

Some individuals may develop eczema following exposure to moist cement dust, caused by the high pH which can induce irritant contact dermatitis after prolonged contact.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

PORTLAND CEMENT

Portland cement clinker caused a mix of heterogeneous effects on the cornea and the calculated irritation index was 128.

Direct contact with the cement can cause corneal lesions due to mechanical stress, immediate or delayed irritation or inflammation.

Direct contact with large quantities of dry concrete or splashes of wet concrete can cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Respiratory sensitizationPORTLAND CEMENT

There are no indications of sensitization of the respiratory system. Based on available data, it does not meet the classification criteria.

Skin sensitizationPORTLAND CEMENT

Some individuals may develop eczema following exposure to wet concrete dust, caused by an immunological reaction to water-soluble Cr(VI) that causes allergic contact dermatitis.

The response can appear in a variety of forms that can range from a mild rash to severe dermatitis.

No sensitizing effect is expected if the cement contains a water-soluble Cr(VI) reducing agent until the indicated period of effectiveness of such reducing agent is exceeded

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

**SECTION 11. Toxicological information ... / >>****PORTLAND CEMENT**

No indication. Based on available data, it does not meet the classification criteria.

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

**PORTLAND CEMENT**

No causal association has been established between exposure to Portland cement and cancer. The epidemiological literature does not support the identification of Portland cement as a suspected human carcinogen. Portland cement is not classifiable as a human carcinogen (according to ACGIH A4: Agents which cause concern about being carcinogenic to humans but which cannot be definitively assessed due to lack of data. In vitro studies or on animals do not provide indications of carcinogenicity that are sufficient to classify the agent with one of the other notations). Based on available data, it does not meet the classification criteria.

**REPRODUCTIVE TOXICITY**

Does not meet the classification criteria for this hazard class

**PORTLAND CEMENT**

Based on available data, it does not meet the classification criteria.

**STOT - SINGLE EXPOSURE**

May cause respiratory irritation

**PORTLAND CEMENT**

Cement dust can irritate the throat and respiratory system. Coughing, sneezing and shortness of breath may occur following exposures above the occupational exposure limits. Overall, the evidence collected clearly indicates that occupational exposure to cement dust has produced deficits in respiratory function. However, the available evidence is currently insufficient to establish with certainty the dose-response relationship for these effects.

**STOT - REPEATED EXPOSURE**

Does not meet the classification criteria for this hazard class

**PORTLAND CEMENT**

Long-term exposure to respirable cement dust above the occupational exposure limit can lead to coughing, shortness of breath and chronic obstructive changes in the respiratory tract. No chronic effects were observed at low concentrations. Based on available data, the classification criteria are not met.

**ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class

**PORTLAND CEMENT**

Not applicable as cement is not used as an aerosol.

**11.2. Information on other hazards**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

**SECTION 12. Ecological information****12.1. Toxicity****ZINCO STEARATO**

EC50 - for Crustacea

5,2 mg/l/48h

EC50 - for Algae / Aquatic Plants

0,99 mg/l/72h

**12.2. Persistence and degradability**

Information not available

**12.3. Bioaccumulative potential**

Information not available



**SECTION 12. Ecological information ... / >>****12.4. Mobility in soil**

Information not available

**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  $\geq$  than 0,1%.

**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

**12.7. 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 or ID 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. Maritime transport in bulk according to IMO instruments**

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/EU:

None

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

**SECTION 15. Regulatory information ... / >>**Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors  
not applicableSubstances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 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 not been performed for the preparation/for the substances indicated in section 3.

**SECTION 16. Other information**

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

<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>H318</b>	Causes serious eye damage.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H400</b>	Very toxic to aquatic life.

## LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: 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: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train

**SECTION 16. Other information ... / >>**

- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term 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) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) 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) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII 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.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

**Changes to previous review:**

The following sections were modified:

02 / 11 / 12.