

## Safety Data Sheet

According to Canadian HPR - WHMIS 2015

### 1. Identification

#### 1.1. Product identifier

Code: CERASIST\_CAR-A  
 Product name: CERASIST CARTUCCIA PARTE A

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

Intended use: epoxy mastic part A

Identified Uses	Industrial	Professional	Consumer
ADHESIVE SYSTEM/TREATMENT FOR STONE SECTOR	✓	✓	-

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

Name: TENAX SPA  
 Full address: Via I Maggio, 226  
 District and Country: 37020 Volargne Italy (VR)  
 Tel: +39 045 6887593  
 Fax: +39 045 6862456

e-mail address of the competent person responsible for the Safety Data Sheet: msds@tenax.it

Supplier: Tenax Usa  
 7606 Whitehall Executive Center Drive Suite 400, 28273 Charlotte NC, US  
 Tel. 001 7045831173 - Fax 001 7045833166  
 info@tenaxusa.com

#### 1.4. Emergency telephone number

For urgent inquiries refer to 24hrs:

**Manitoba Poison Centre 1-855-7POISON (1-855-776-4766)**

**BC Drug and Poison Information Centre (DPIC)**  
 1-800-567-8911 (toll free in BC)  
 (604) 682-5050 (Greater Vancouver or outside of BC)

**Centre antipoison du Québec 1-800-463-5060**

**IWK Regional Poison Centre**  
 1-800-565-8161 (within NS and PEI only)  
 (902) 470-8161 (Halifax or outside NS, PEI)

**Poison And Drug Information Services (PADIS)**  
 1-800-332-1414 (toll free in Alberta, Northwest Territories)  
 1-866-454-1212 (toll free in Saskatchewan)  
 (403) 944-1414 (in Calgary, outside of Alberta, or VOIP users)

**Ontario Poison Centre 1-800-268-9017**

### 2. Hazards identification

#### 2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in Canada's Hazardous Products Regulations (HPR) (WHMIS 2015). The product thus requires a safety datasheet.  
 Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

### 2. Hazards identification ... / >>

#### Classification and Hazard Statement

Eye irritation, category 2  
Skin irritation, category 2  
Skin sensitization, category 1A

Causes serious eye irritation.  
Causes skin irritation.  
May cause an allergic skin reaction.

Hazard pictograms:



Signal words: Warning

Hazard statements:

**H319** Causes serious eye irritation.  
**H315** Causes skin irritation.  
**H317** May cause an allergic skin reaction.

Precautionary statements:

Prevention:

**P261** Avoid breathing dust / fume / gas / mist / vapours / spray.  
**P280** Wear protective gloves / eye protection / face protection.  
**P264** Wash the hands thoroughly after handling.  
**P272** Contaminated work clothing should not be allowed out of the workplace.

Response:

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P333+P313** If skin irritation or rash occurs: Get medical advice / attention.  
**P337+P313** If eye irritation persists: Get medical advice / attention.  
**P362+P364** Take off contaminated clothing and wash it before reuse.

Storage:

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Disposal:

**P501** Dispose of contents / container according to applicable law.

#### 2.2. Other hazards

Environmental classification as for Reg. (EC) 1272/2008 (CLP):

The product is classified as hazardous for environment pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP).

#### Classification and Hazard Statement

Hazardous to the aquatic environment, chronic toxicity, category 2 Toxic to aquatic life with long lasting effects.

Hazard pictograms:



Hazard statements:

**H411** Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

**P273** Avoid release to the environment.

Response:

**P391** Collect spillage.

Storage:

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Disposal:

**P501** Dispose of contents / container according to applicable law.

### 3. Composition/information on ingredients

#### 3.2. Mixtures

Contains:

Identification	x = Conc. % (w/w)	Classification:
<b>BIS-[4-(2,3-EPOXI)PROPOXI]PHENYL]PROPANE</b>		
Epoxy resin		
CAS	1675-54-3      47 ≤ x < 49	Eye irritation, category 2 H319, Skin irritation, category 2 H315, Skin sensitization, category 1B H317, Hazardous to the aquatic environment, chronic toxicity, category 2 H411
<i>REACH Reg.</i> 01-2119456619-26		
<b>BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE</b>		
CAS	23 ≤ x < 25	Skin irritation, category 2 H315, Skin sensitization, category 1A H317, Hazardous to the aquatic environment, chronic toxicity, category 2 H411
<i>REACH Reg.</i> 01-2119454392-40		
<b>OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL] DERIVS.</b>		
EPOSIR 7106		
ALKYL (C12-C14) GLYCIDYL ETHER		
CAS	68609-97-2      5 ≤ x < 6	Skin irritation, category 2 H315, Skin sensitization, category 1 H317
<i>REACH Reg.</i> 01-2119485289-22		
<b>BENZYL ALCOHOL</b>		
BENZYL ALCOHOL		
CAS	100-51-6      1 ≤ x < 1.5	Acute toxicity, category 4 H302, Acute toxicity, category 4 H332
<i>REACH Reg.</i> 01-2119492630-38		
<b>TRIS (4-NONYLPHENOL, BRANCHED) PHOSPHITE</b>		
TNPP		
CAS	26523-78-4      0.1 ≤ x < 0.25	Skin irritation, category 2 H315, Skin sensitization, category 1 H317, Hazardous to the aquatic environment, acute toxicity, category 1 H400 M=1, Hazardous to the aquatic environment, chronic toxicity, category 1 H410 M=1
<i>REACH Reg.</i> 01-2119520601-54-XXXX		
<b>2,6-TERT BUTYL-P-CRESOL</b>		
2,6-DI-T-BUTYL-PARACRESOL		
BHT		
CAS	128-37-0      0 ≤ x < 0.25	Hazardous to the aquatic environment, acute toxicity, category 1 H400 M=1, Hazardous to the aquatic environment, chronic toxicity, category 1 H410 M=1
<i>REACH Reg.</i> 01-2119565113-46		

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

### 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. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly 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

## 5. Fire-fighting 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).

## 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.

## 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

## 8. Exposure controls/personal protection

### 8.1. Control parameters

Information not available

### 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. Personal protective equipment must comply with current regulations.

#### HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (OSHA 29 CFR 1910.138): 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 I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing.

#### EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133, CSA Standard CAN/CSA-Z94.3-92).

#### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134, CSA Standard Z94.4-02). 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 or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134, CSA Standard Z94.4-02.

#### ENVIRONMENTAL EXPOSURE CONTROLS

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

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

**HAND PROTECTION:** Protect hands with work gloves for protection from chemical agents in nitrile or fluoroelastomer (EN 374-1: 2016) at least type B or higher based on the risk assessment carried out by the company. Breakthrough time > 480 minutes.

Material thickness:

#### NITRILE

short contact > 0.38 mm

prolonged contact > 0.55 mm

#### FLUOROELASTOMER

short contact > 0.50 mm

prolonged contact > 1.50 mm

## 9. Physical and chemical properties

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

Properties	Value	Information
Appearance	paste	
Colour	transparent	
Odour	characteristic	
Odour threshold	not available	
pH	not available	Reason for missing data: substance/mixture is non-polar/aprotic (eg: an organic solvent mixture)
Melting point / freezing point	not available	
Initial boiling point	not available	
Boiling range	not available	
Flash point	> 93 °C (199,4 °F)	
Evaporation rate	not available	
Flammability	not available	
Lower inflammability limit	not available	
Upper inflammability limit	not available	
Lower explosive limit	not available	

### 9. Physical and chemical properties ... / >>

Upper explosive limit	not available
Vapour pressure	not available
Vapour density	not available
Relative density	1.25 g/cm <sup>3</sup>
Solubility	insoluble in water
Partition coefficient: n-octanol/water	not available
Auto-ignition temperature	not available
Decomposition temperature	not available
Viscosity	not available
Explosive properties	not available
Oxidising properties	not available

#### 9.2. Other information

VOC : 1,58 % - 19,72 g/litre

### 10. Stability and reactivity

#### 10.1. Reactivity

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

##### BENZYL ALCOHOL

Decomposes at temperatures above 870°C/1598°F. Possibility of explosion.

#### 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.

##### BENZYL ALCOHOL

May react dangerously with: hydrobromic acid, iron, oxidising agents, sulphuric acid. Risk of explosion on contact with: phosphorus trichloride.

#### 10.4. Conditions to avoid

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

##### BENZYL ALCOHOL

Avoid exposure to: air, sources of heat, naked flames.

#### 10.5. Incompatible materials

##### BENZYL ALCOHOL

Incompatible with: sulphuric acid, oxidising substances, aluminium.

##### BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE

Avoid contact with: acids, bases, oxidising substances.

Avoid unintentional contact with amines.

#### 10.6. Hazardous decomposition products

##### BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE

The decomposition products depend on the temperature, the available air and the presence of other substances.

An uncontrolled exothermic reaction of epoxy resins liberates phenolic derivatives, carbon monoxide and water.

### 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

##### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

##### Information on likely routes of exposure

Information not available

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

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

**BENZYL ALCOHOL**  
 LD50 (Oral): 1230 mg/kg Rat  
 LD50 (Dermal): 2000 mg/kg Rabbit  
 LC50 (Inhalation vapours): > 4.1 mg/l/4h Rat

**2,6-TERT BUTYL-P-CRESOL**  
 LD50 (Oral): > 6000 mg/kg rat  
 LD50 (Dermal): > 2000 mg/kg rat

**TRIS (4-NONYLPHENOL, BRANCHED) PHOSPHITE**  
 LD50 (Oral): > 2000 mg/kg ratto  
 LD50 (Dermal): > 2000 mg/kg coniglio

**BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE**  
 LD50 (Oral): 11400 mg/kg Ratto  
 LD50 (Dermal): 2000 mg/kg Ratto

**BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE**  
 LD50 (Oral): > 2000 mg/kg Ratto  
 LD50 (Dermal): > 2000 mg/kg Ratto

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Carcinogenicity Assessment:  
 1675-54-3 BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE  
 IARC:3  
 7631-86-9 AMORPHOUS SILICATE HYDRATE  
 IARC:3  
 128-37-0 2,6-TERT BUTYL-P-CRESOL  
 IARC:3

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

### 11. Toxicological information ... / >>

#### 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

### 12. Ecological information

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.

#### 12.1. Toxicity

##### BENZYL ALCOHOL

LC50 - for Fish	770 mg/l/96h Pimephales promelas
EC50 - for Crustacea	230 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	770 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Crustacea	51 mg/l Daphnia magna

##### 2,6-TERT BUTYL-P-CRESOL

LC50 - for Fish	0.199 mg/l/96h
EC50 - for Crustacea	0.48 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	0.758 mg/l/72h
Chronic NOEC for Fish	0.053 mg/l
Chronic NOEC for Crustacea	0.069 mg/l

##### TRIS (4-NONYLPHENOL, BRANCHED) PHOSPHITE

LC50 - for Fish	7.1 mg/l/96h pesce zebra
EC50 - for Crustacea	0.42 mg/l/48h daphnia magna
LC10 for Fish	44 mg/l/28d

##### BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE

LC50 - for Fish	1.3 mg/l/96h
EC50 - for Crustacea	2.1 mg/l/48h Dafnia
EC50 - for Algae / Aquatic Plants	> 11 mg/l/72h
Chronic NOEC for Crustacea	0.3 mg/l Dafnia

##### BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE

LC50 - for Fish	2.54 mg/l/96h Pesce di acqua dolce
EC50 - for Crustacea	> 1000 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1.8 mg/l/72h Selenastrum capricornutum

#### 12.2. Persistence and degradability



### 12. Ecological information ... / >>

BENZYL ALCOHOL  
 Rapidly degradable

2,6-TERT BUTYL-P-CRESOL  
 NOT rapidly degradable

BIS-[4-(2,3-EPOXI)PHENYL]PROPANE  
 NOT rapidly degradable

BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE  
 NOT rapidly degradable

#### 12.3. Bioaccumulative potential

BENZYL ALCOHOL

Partition coefficient: n-octanol/water 1.1

2,6-TERT BUTYL-P-CRESOL

BCF > 230

BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE

Partition coefficient: n-octanol/water 3.6

BCF 150

#### 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. Other adverse effects

Information not available

### 13. Disposal considerations

#### 13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

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.

### 14. Transport information

#### 14.1. UN number

ADR / RID, IMDG, IATA: 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity  $\leq$  5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity  $\leq$  5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity  $\leq$  5Kg or 5L, is not submitted to IATA dangerous goods regulations.

**14. Transport information** ... / >>

**14.2. UN proper shipping name**

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE; BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE)  
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE; BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE)  
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(BIS-[4-(2,3-EPOXIPROPOXI)PHENYL]PROPANE; BISPHENOL F DIGLYCIDYL ETHER, ISOMER MIXTURE)

**14.3. Transport hazard class(es)**

ADR / RID: Class: 9 Label: 9



IMDG: Class: 9 Label: 9



IATA: Class: 9 Label: 9



**14.4. Packing group**

ADR / RID, IMDG, IATA: III

**14.5. Environmental hazards**

ADR / RID: Environmentally Hazardous



IMDG: Marine Pollutant



IATA: Environmentally Hazardous



**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: 90 Special provision: -	Limited Quantities: 5 L	Tunnel restriction code: (-)
IMDG:	EMS: F-A, S-F	Limited Quantities: 5 L	
IATA:	Cargo: Passengers: Special provision:	Maximum quantity: 450 L Maximum quantity: 450 L A97, A158, A197, A215	Packaging instructions: 964 Packaging instructions: 964

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

Information not relevant

**15. Regulatory information**

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

Substances subject to the Rotterdam Convention:  
None

Canadian Regulatory Information

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR).

Safety Data Sheet according to WHMIS 2015.

### 15. Regulatory information ... / >>

Inventory Status of the contained substance/s. \_\_\_\_\_

All ingredients are listed in DSL.

### 16. Other information

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

<b>H302</b>	Harmful if swallowed.
<b>H332</b>	Harmful if inhaled.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H400</b>	Very toxic to aquatic life.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.
<b>H411</b>	Toxic to aquatic life with long lasting effects.

**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)
- CLP: Regulation (EC) 1272/2008
- 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
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PEL: Predicted exposure level
- REACH: Regulation (EC) 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: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

**GENERAL BIBLIOGRAPHY:**

- GHS rev. 5
- The Merck Index. 10th Edition
- Handling Chemical Safety
- Niosh - Registry of Toxic Effects of Chemical Substances
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
- Hazard Products Regulation (HPR)
- WHMIS 2015
- ONTARIO R.R.O. 1990, Regulation 883 (version July 2016)
- IARC website
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act

**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.

**16. Other information** ... / >>**CALCULATION METHODS FOR CLASSIFICATION**

Product classification derives from criteria established by the Canada's Hazardous Products Regulations (HPR) (WHMIS 2015), unless determined otherwise in Section 11 and 12. The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:

The following sections were modified:

01 / 09 / 10.