



Tenax Spa

TITANIUM FLOWING

Revision nr.1
Dated 11/23/2021
First compilation
Printed on 11/23/2021
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Safety Data Sheet

According to Canadian HPR - WHMIS 2015

1. Identification

1.1. Product identifier

Product name **TITANIUM FLOWING**

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

Intended use **Epoxy vinyl ester liquid acrylate mastic**

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 (VR)**
Italy
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.

Classification and Hazard Statement

2. Hazards identification ... / >>

Flammable liquid, category 3
Reproductive toxicity, category 2
Specific target organ toxicity - repeated exposure, category 1
Eye irritation, category 2
Skin irritation, category 2
Specific target organ toxicity - single exposure, category 3
Skin sensitization, category 1

Flammable liquid and vapour.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Causes serious eye irritation.
Causes skin irritation.
May cause respiratory irritation.

May cause an allergic skin reaction.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

H226	Flammable liquid and vapour.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.

Precautionary statements:

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P202	Do not handle until all safety precautions have been read and understood.
P242	Use non-sparking tools.
P201	Obtain special instructions before use.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P264	Wash the hands thoroughly after handling.
P240	Ground and bond container and receiving equipment.
P243	Take action to prevent static discharges.
P241	Use explosion-proof [electrical / ventilating / lighting / . . .] equipment.
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.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P312	Call a POISON CENTRE / doctor / . . . if you feel unwell.
P304+P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: use CO2, sand, powder to extinguish.

Storage:

P403+P235	Store in a well-ventilated place. Keep cool.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal:

P501	Dispose of contents / container according to applicable law.
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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 3	Harmful to aquatic life with long lasting effects.
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Hazard statements:

H412	Harmful to aquatic life with long lasting effects.
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2. Hazards identification ... / >>

Precautionary statements:

Prevention:

P273

Avoid release to the environment.

Response:

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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:

STYRENE

STYROL

CAS 100-42-5 $47 \leq x < 49$ **Flammable liquid, category 3 H226, Reproductive toxicity, category 2 H361, Acute toxicity, category 4 H332, Specific target organ toxicity - repeated exposure, category 1 H372, Aspiration hazard, category 1 H304, Eye irritation, category 2 H319, Skin irritation, category 2 H315, Specific target organ toxicity - single exposure, category 3 H335, Hazardous to the aquatic environment, chronic toxicity, category 3 H412**

REACH Reg. 01-2119457861-32

METHYL METHACRYLATE

METHYL METHACRYLATE

METHYL 2-METHYL PROP-2-ENOATE

CAS 80-62-6 $2 \leq x < 2.5$

Flammable liquid, category 2 H225, Skin irritation, category 2 H315, Specific target organ toxicity - single exposure, category 3 H335, Skin sensitization, category 1 H317

REACH Reg. 01-2119452498-28-XXXX

OCTABENZONE

CAS 1843-05-6

$0.1 \leq x < 0.4$

Skin sensitization, category 1 H317

REACH Reg. 01-2119557833-30

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

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

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

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

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

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

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

Information not available

5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.



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5. Fire-fighting measures ... / >>

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

METHYL METHACRYLATE

Heat may cause the product to polymerise, which could lead to explosion.

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available



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8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; 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 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

STYRENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-	10		20		
ONT	CAN		35		100	
OSHA	USA		100		200 (C)	

METHYL METHACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-	205	50	410	100	
OEL	EU		50		100	
OSHA	USA	410	100			

Legend:

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

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 (OSHA 29 CFR 1910.138).

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 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 limit of use will be defined by the manufacturer (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 neoprene (EN 374-1: 2016) at least type B or higher based on the risk assessment carried out by the company



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9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	TRANSPARENT-BLUE	
Odour	aromatic	
Odour threshold	Not available	
pH	Not available	
Melting point / freezing point	Not available	
Initial boiling point	> 35 °C (95 °F)	
Boiling range	Not available	
Flash point	> 23 °C (73,4 °F)	
Evaporation rate	Not available	
Flammability (solid, gas)	Not available	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	1.05 g/cc	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	>20,5 mm2/sec (40°C)	
Explosive properties	Not available	
Oxidising properties	Not available	

9.2. Other information

VOC : 49,30 % - 517,67 g/litre

10. Stability and reactivity

10.1. Reactivity

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

STYRENE

Polymerises at temperatures above 65°C/149°F. Fire hazard. Possibility of explosion.

Added with an inhibitor that requires a small amount of dissolved oxygen at temperatures < 25°C/77°F.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

STYRENE

May react dangerously with: peroxides, strong acids. May polymerise on contact with: aluminium

trichloride, azobisisobutyronitrile, dibenzoyl peroxide, sodium. Risk of explosion on contact with: butyllithium, chlorosulphuric acid, di-tert-butyl peroxide, oxidising substances, oxygen.

METHYL METHACRYLATE

May polymerise on contact with: ammonia, organic peroxides, persulphates. Risk of explosion on contact with: dibenzoyl

peroxide, di-tert-butyl peroxide, propionaldehyde. May react dangerously with: strong oxidising agents. Forms explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

STYRENE

Avoid contact with: oxidising substances, copper, strong acids.

METHYL METHACRYLATE

Avoid exposure to: heat, UV rays. Avoid contact with: oxidising substances, reducing substances, acids, bases.



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10. Stability and reactivity ... / >>

10.5. Incompatible materials

STYRENE

Incompatible materials: plastic materials.

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.

METHYL METHACRYLATE

When heated to decomposition releases: harsh fumes, zinc alloys.

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

STYRENE

WORKERS: inhalation; contact with the skin.

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

STYRENE

The acute toxicity by inhalation at 1000 ppm affects the central nervous system with headache and dizziness, lack of coordination; irritation of the eye and respiratory tract mucous membranes occurs at 500 ppm. Chronic exposure causes depression of the central and peripheral nervous system with loss of memory, headache and drowsiness starting at 20 ppm; digestive disorders with nausea and loss of appetite; irritation of the respiratory tract with chronic bronchitis; dermatosis. Repeated exposure, at low doses of inhaled substance, causes irreversible changes to hearing and may cause changes in colour vision. No certain data is available on the reversibility of the visual impairment. Repeated skin exposure causes irritation. The substance degrades the skin, which can cause dryness and cracking.

Interactive effects

STYRENE

The metabolism of the substance is inhibited by ethanol. When styrene is photo-oxidised with ozone and nitrogen dioxide, as in the formation of smog, products highly irritating for the human eye may ensue.

ACUTE TOXICITY

METHYL METHACRYLATE

LD50 (Oral):	> 5000 mg/kg
LD50 (Dermal):	5000 mg/kg
LC50 (Inhalation vapours):	29.8 mg/l/4h

STYRENE

LD50 (Oral):	5000 mg/kg Rat
LD50 (Dermal):	> 2000 mg/kg Rat
LC50 (Inhalation vapours):	11.8 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin



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11. Toxicological information ... / >>

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:

100-42-5	STYRENE
	ACGIH:: A4
	IARC:2B
	NTP: Reasonably Anticipated
80-62-6	METHYL METHACRYLATE
	ACGIH:: A4
	IARC:3
102-71-6	TRIETHANOLAMINE
	IARC:3

STYRENE

Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2002).
Classified as "probable carcinogen" by the US National Toxicology Program (NTP) - (US DHHS, 2014).

REPRODUCTIVE TOXICITY

Suspected of damaging fertility or the unborn child

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

Causes damage to organs

ASPIRATION HAZARD

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

12. Ecological information

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

12.1. Toxicity

METHYL METHACRYLATE

LC50 - for Fish	130 mg/l/96h Pimephales promelas
EC50 - for Crustacea	69 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	110 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Fish	9.4 mg/l Brachydanio rerio
Chronic NOEC for Crustacea	37 mg/l Daphnia magna

STYRENE

LC50 - for Fish	4.02 mg/l/96h Pimephales promelas
EC50 - for Crustacea	4.7 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	4.9 mg/l/72h Pseudokirchneriella subcapitata
EC10 for Algae / Aquatic Plants	0.28 mg/l/72h



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12. Ecological information ... / >>

12.2. Persistence and degradability

METHYL METHACRYLATE

Solubility in water 15300 mg/l
Rapidly degradable

STYRENE

Solubility in water 320 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

METHYL METHACRYLATE

Partition coefficient: n-octanol/water 1.38

STYRENE

Partition coefficient: n-octanol/water 2.96

BCF 74

12.4. Mobility in soil

METHYL METHACRYLATE

Partition coefficient: soil/water 0.94

STYRENE

Partition coefficient: soil/water 2.55

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: 1866

The product, if packaged in packages of less than 450 litres, is not subject to ADR regulations as stated in 2.2.3.1.5.

The product, if packaged in packages of less than 450 litres, is not subject to obligations relating to marking, labelling and package testing in accordance with 2.3.2.5 of the IMDG CODE.



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14. Transport information ... / >>

14.2. UN proper shipping name

ADR / RID: RESIN SOLUTION
IMDG: RESIN SOLUTION
IATA: RESIN SOLUTION

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3



IMDG: Class: 3 Label: 3



IATA: Class: 3 Label: 3



14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: -		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3	

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.

16. Other information

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H361	Suspected of damaging fertility or the unborn child.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.



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16. Other information ... / >>

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H412	Harmful 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.

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.