

### Safety data sheet according to U.S.A. Federal Hazcom 2012

#### 1. Identification

##### 1.1. Product identifier

Product name **TITANIUM LIQUIDO**

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

Intended use **Not available**

##### 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**Product distribution by: **TENAX USA – 7606 Whitehall Executive Center Drive - Unit 400 - Charlotte NC 28273 Tel. +1 704-583-1173 - Tel: (800) 341 0432 - Fax +1 704-583-3166 - info@tenaxusa.com**

##### 1.4. Emergency telephone number

For urgent inquiries refer to **1-800-5355053 (1-352-323-3500 international)**

#### 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200). 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

Flammable liquid, category 3  
Reproductive toxicity, category 2  
Specific target organ toxicity - repeated exposure, category 1

Eye irritation, category 2  
Skin irritation, category 2  
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 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.  
**H317** May cause an allergic skin reaction.

##### Precautionary statements:

Prevention:



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

<b>P201</b>	Obtain special instructions before use.
<b>P202</b>	Do not handle until all safety precautions have been read and understood.
<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P233</b>	Keep container tightly closed.
<b>P240</b>	Ground / bond container and receiving equipment.
<b>P241</b>	Use explosion-proof electrical / ventilating / lighting / . . . / equipment.
<b>P242</b>	Use only non-sparking tools.
<b>P243</b>	Take precautionary measures against static discharge.
<b>P260</b>	Do not breathe dust / fume / gas / mist / vapours / spray.
<b>P261</b>	Avoid breathing dust / fume / gas / mist / vapours / spray.
<b>P264</b>	Wash . . . thoroughly after handling.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
<b>P280</b>	Wear protective gloves / clothing and eye / face protection.
Response:	
<b>P302+P352</b>	IF ON SKIN: wash with plenty of water / . . .
<b>P303+P361+P353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P308+P313</b>	IF exposed or concerned: Get medical advice / attention.
<b>P314</b>	Get medical advice / attention if you feel unwell.
<b>P332+P313</b>	If skin irritation occurs: Get medical advice / attention.
<b>P333+P313</b>	If skin irritation or rash occurs: Get medical advice / attention.
<b>P337+P313</b>	If eye irritation persists: Get medical advice / attention.
<b>P362+P364</b>	Take off contaminated clothing and wash it before reuse.
<b>P363</b>	Wash contaminated clothing before reuse.
<b>P370+P378</b>	In case of fire: use . . . to extinguish.
Storage:	
<b>P403+P235</b>	Store in a well-ventilated place. Keep cool.
<b>P405</b>	Store locked up.
Disposal:	
<b>P501</b>	Dispose of contents / container according to applicable law.

#### 2.2. Other hazards

Environmental classification as for Reg. (EU) 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.

Hazard statements:

**H412** Harmful to aquatic life with long lasting effects.

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.

Additional hazards

Information not available

### 3. Composition/information on ingredients

#### 3.1. Substances

Information not relevant



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### 3. Composition/information on ingredients ... / >>

#### 3.2. Mixtures

##### Contains:

**Identification**                      **Conc. %**                      **Classification:**

##### STYRENE

CAS      100-42-5      43.349

Flammable liquid, category 3 H226, Reproductive toxicity, category 2 H361d, 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, Hazardous to the aquatic environment, chronic toxicity, category 3 H412

EC      202-851-5

INDEX      601-026-00-0

##### METHYL METHACRYLATE

CAS      80-62-6      2.03

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

EC      201-297-1

INDEX      607-035-00-6

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. 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

### 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.

##### 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



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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. If the product is flammable, use explosion-proof equipment. 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. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. 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 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

## 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	OSHA-PEL	Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits (PELs).
EU	OEL EU	Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2016



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### 8. Exposure controls/personal protection ... / >>

#### STYRENE

##### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-	85	20	170	40	
OSHA	USA		100		200 (C)	
CAL/OSHA	USA	215	50	425 (C)	500 (C)	SKIN
NIOSH	USA	215	50	425	100	

#### METHYL METHACRYLATE

##### Threshold Limit Value

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

##### Legend:

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

TLV of solvent mixture: 87 mg/m3

### 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 (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

#### EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

#### 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). 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 and OSHA 29 CFR 1910.134.

#### 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.

### 9. Physical and chemical properties

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

Appearance	Not available	
Colour	Not available	
Odour	Not available	
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	



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

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	1.10
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	>20,5 mm <sup>2</sup> /sec (40°C)
Explosive properties	Not available
Oxidising properties	Not available

#### 9.2. Other information

VOC :	45,38 %	-	499,18	g/litre
VOC (volatile carbon) :	41,17 %	-	452,87	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, diterbutyl peroxide, oxidising substances, oxygen.

##### METHYL METHACRYLATE

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

#### 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.



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### 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

LC50 (Inhalation) of the mixture:

Not classified (no significant component)

LD50 (Oral) of the mixture:

Not classified (no significant component)

LD50 (Dermal) of the mixture:

Not classified (no significant component)

STYRENE

LD50 (Oral)

5000 mg/kg Rat

##### 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:

100-42-5



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

80-62-6 STYRENE  
ACGIH:: A4  
IARC:2B  
NTP: Reasonably Anticipated

METHYL METHACRYLATE  
ACGIH:: A4  
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

Does not meet the classification criteria for this hazard class

#### STOT - REPEATED EXPOSURE

Causes damage to organs

#### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: >20,5 mm<sup>2</sup>/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

Information not available

#### 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





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

METHYL METHACRYLATE

Partition coefficient: soil/water 0.94

STYRENE

Partition coefficient: soil/water 2.55

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

Information not available

#### 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 30 litres, is not subject to obligations relating to marking, labelling and package testing in accordance with 2.3.2.5 of the IMDG CODE.

#### 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



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### 14. Transport information ... / >>

#### 14.6. Special precautions for user

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

#### 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

##### U.S. Federal Regulations

##### Clean Air Act Section 112(b):

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### Clean Air Act Section 602 Class I Substances:

No component(s) listed.

##### Clean Air Act Section 602 Class II Substances:

No component(s) listed.

##### Clean Water Act – Priority Pollutants:

No component(s) listed.

##### Clean Water Act – Toxic Pollutants:

No component(s) listed.

##### DEA List I Chemicals (Precursor Chemicals):

No component(s) listed.

##### DEA List II Chemicals (Essential Chemicals):

No component(s) listed.

##### EPA List of Lists:

##### 313 Category Code:

80-62-6 METHYL METHACRYLATE  
100-42-5 STYRENE

##### EPCRA 302 EHS TPQ:

No component(s) listed.

##### EPCRA 304 EHS RQ:

No component(s) listed.

##### CERCLA RQ:

80-62-6 METHYL METHACRYLATE  
100-42-5 STYRENE

##### EPCRA 313 TRI:

80-62-6 METHYL METHACRYLATE  
100-42-5 STYRENE

##### RCRA Code:

80-62-6 METHYL METHACRYLATE

##### CAA 112 (r) RMP TQ:

No component(s) listed.



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

#### State Regulations

##### Massachusetts:

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### Minnesota:

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### New Jersey:

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### New York:

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### Pennsylvania:

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### California:

100-42-5 STYRENE  
80-62-6 METHYL METHACRYLATE

##### Proposition 65:

This product does not contain any substances known to the State of California to cause cancer, reproductive harm or birth defects.

#### International Regulations

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

#### Canadian WHMIS

Information not available

### 16. Other information

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

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Repr. 2</b>	Reproductive toxicity, category 2
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>STOT RE 1</b>	Specific target organ toxicity - repeated exposure, category 1
<b>Asp. Tox. 1</b>	Aspiration hazard, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<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 Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.
<b>H361</b>	Suspected of damaging fertility or the unborn child.
<b>H361d</b>	Suspected of damaging the unborn child.
<b>H332</b>	Harmful if inhaled.
<b>H372</b>	Causes damage to organs through prolonged or repeated exposure.
<b>H304</b>	May be fatal if swallowed and enters airways.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H412</b>	Harmful to aquatic life with long lasting effects.



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#### LEGEND:

- 313 CATEGORY CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CERCLA RQ: Reportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act)
- CLP: EC Regulation 1272/2008
- DEA: Drug Enforcement Administration
- EmS: Emergency Schedule
- EPA: US Environmental Protection Agency
- EPCRA: Emergency Planning and Community Right-to Know Act
- EPCRA 302 EHS TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
- EPCRA 304 EHS RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
- EPCRA 313 TRI: Toxics Release Inventory (Section 313 Category Code)
- 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
- RCRA Code: Resource Conservation and Recovery Act Code
- REL: Recommended exposure limit
- 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.
- TSCA: Toxic Substances Control Act
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- WHMIS: Workplace Hazardous Materials Information System.

#### GENERAL BIBLIOGRAPHY:

- GHS rev. 3
- 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
  
- 6 NYCRR part 597
- Cal/OSHA website
- California Safe Drinking Water and Toxic Enforcement Act
- EPA website
- Hazard Communication Standard (HCS 2012)
- IARC website
- List Of Lists EPA: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
- Massachusetts 105 CMR Department of public health 670.000: "Right to Know"
- Minnesota Chapter 5206 Departemnt Of Labor and Industry Hazardous Substances, Employee "Right to Know".
- New Jersey Worker and Community Right to know Act N.J.S.A.
- NTP. 2011. Report on Carcinogens, 12th Edition.
- OSHA website
- Pennsylvania, Hazardous Substance List, Chapter 323

#### 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.



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Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 05 / 08 / 09 / 10 / 11 / 12 / 13 / 14.