

Safety Data Sheet

According to U.S.A. Federal Hazcom 2012

1. Identification

1.1. Product identifier

Code: **VERTIGO_T**
Product name: **VERTIGO_T**

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

Intended use: **Vinylester 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 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: **Infotrac**
US and Canada: 1-800-535-5053
Int'l: 1-352-323-3500
info@infotrac.net

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	Flammable liquid and vapour.
Reproductive toxicity, category 2	Suspected of damaging fertility or the unborn child.
Acute toxicity, category 4	Harmful if swallowed.
Specific target organ toxicity - repeated exposure, category 1	Causes damage to organs through prolonged or repeated exposure.
Eye irritation, category 2	Causes serious eye irritation.
Skin irritation, category 2	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	May cause respiratory irritation.
Skin sensitization, category 1	May cause an allergic skin reaction.

Hazard pictograms:



2. Hazards identification ... / >>

Signal words: Danger

Hazard statements:

- H226** Flammable liquid and vapour.
- H361** Suspected of damaging fertility or the unborn child.
- H302** Harmful if swallowed.
- 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 only 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 / bond container and receiving equipment.
- P243** Take precautionary measures against static discharge.
- 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 / shower.
- P308+P313** IF exposed or concerned: Get medical advice / attention.
- P312** Call a POISON CENTER / doctor / . . . / if you feel unwell.
- P333+P313** If skin irritation or rash occurs: Get medical advice / attention.
- P337+P313** If eye irritation persists: Get medical advice / attention.
- P304+P340** IF INHALED: remove person to fresh air and keep comfortable for breathing.
- P330** Rinse mouth.
- P302+P352** IF ON SKIN: wash with plenty of water / . . .
- P362+P364** Take off contaminated clothing and wash it before reuse.
- P370+P378** In case of fire: use CO2, sand, powder to extinguish.
- P363** Wash contaminated clothing before reuse.

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.

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.

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.

2. Hazards identification ... / >>

Additional hazards
Information not available

3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification:
STYRENE		
INDEX 601-026-00-0	42 ≤ x < 44	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
EC 202-851-5		
CAS 100-42-5		
REACH Reg. 01-2119457861-32		
DIISOPROPANOL-PARA-TOLUIDINE		
	0.7 ≤ x < 1	Acute toxicity, category 2 H300, Eye irritation, category 2 H319, Hazardous to the aquatic environment, chronic toxicity, category 3 H412
EC 254-075-1		
CAS 38668-48-3		
REACH Reg. 01-2119980937-17		
METHACRYLIC ACID		
INDEX 607-088-00-5	0.7 ≤ x < 1	Acute toxicity, category 3 H311, Acute toxicity, category 4 H302, Acute toxicity, category 4 H332, Skin corrosion, category 1A H314, Serious eye damage, category 1 H318, Specific target organ toxicity - single exposure, category 3 H335
EC 201-204-4		
CAS 79-41-4		
REACH Reg. 01-2119463884-26		
OCTABENZENE		
	0.1 ≤ x < 0.4	Skin sensitization, category 1 H317
EC 217-421-2		
CAS 1843-05-6		
REACH Reg. 01-2119557833-30		

* There is a batch 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.

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.

Combustion products: mainly COx

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. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. 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. Handling and storage ... / >>

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).
	TLV-ACGIH	ACGIH 2022

METHACRYLIC ACID

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
CAL/OSHA	USA	70	20			SKIN
NIOSH	USA	70	20			SKIN

2,2',2"-NITRILOTRIETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-	5				
CAL/OSHA	USA	5				

STYRENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-	10		20		
OSHA	USA		100		200	
CAL/OSHA	USA	215	50	425	100	SKIN
NIOSH	USA	215	50	425	100	

MALEIC ANHYDRIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH	-	0.01	0.0025			INHAL
OSHA	USA	1	0.25			
CAL/OSHA	USA	0.4	0.1			
NIOSH	USA	1	0.25			

Siloxanes and Silicones, di-Me, reaction products with silica

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OSHA-PEL	USA	15				INHAL
OSHA-PEL	USA	5				RESP
TLV-ACGIH	-	10				INHAL
TLV-ACGIH	-	3				RESP

Legend:

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

STYRENE

Sampling methods: https://amcaw.ifa.dguv.de/substance/methoden/004-styrene_2016.pdf

8.2. Exposure controls

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

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).

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). 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.

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 against 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

FACE PROTECTION: Chemical and splash protection visor EN 166 1B 3 in transparent propionate or equivalent protection

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	paste	
Colour	yellow	
Odour	Typical aromatic	
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	31 °C	(87,8 °F) Substance:STYRENE
Evaporation rate	not available	
Flammability	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	1.1 g/cm ³	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Auto-ignition temperature	not available	
Decomposition temperature	not available	

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

Viscosity >20,5 mm2/sec (40°C)
Explosive properties not available
Oxidising properties not available

9.2. Other information

Information not available

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.

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.

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.

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

11. Toxicological information ... / >>

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 degreases 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

METHACRYLIC ACID

LD50 (Oral): 1350 mg/kg Ratto
LD50 (Dermal): > 500 mg/kg Coniglio
LC50 (Inhalation vapours): 7.1 mg/l/4h Ratto

STYRENE

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

DIISOPROPANOL-PARA-TOLUIDINE

LD50 (Oral): > 25 mg/kg rat
LD50 (Dermal): > 2000 mg/kg rat

OCTABENZONE

LD50 (Oral): 10000 mg/kg

DIISOPROPANOL-PARA-TOLUIDINE

Oral LD50: OECD-Guideline 423
Dermal LD50: OECD-Guideline 402

SKIN CORROSION / IRRITATION

Causes skin irritation

DIISOPROPANOL-PARA-TOLUIDINE
Rabbit: non-irritating - OECD Guideline 404

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

DIISOPROPANOL-PARA-TOLUIDINE
Rabbit: irritant - OECD Guideline 405

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Skin sensitization

DIISOPROPANOL-PARA-TOLUIDINE
Guinea Pig Maximation Test guinea pig: non-sensitizing (OECD - guideline 406)

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:2A
NTP: Reasonably Anticipated

7631-86-9

11. Toxicological information ... / >>

AMORPHOUS SILICATE HYDRATE

IARC:3

102-71-6

2,2',2"-NITRILOTRIETHANOL

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

Adverse effects on sexual function and fertility

DIISOPROPANOL-PARA-TOLUIDINE

The results of animal studies do not show any effects on fertility. The results were determined in a Screeningtest (OECD 421/422).

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

DIISOPROPANOL-PARA-TOLUIDINE

EC50 (48 h) - OECD - guideline 202, part 1, static;

EC50 (72 h) - OECD - guideline 201, static;

EC20 (30 min) Microorganisms/Effects on activated sludge: > 1,995 mg/l, activated sludge, industrial (OECD - guideline 209)

METHACRYLIC ACID

LC50 - for Fish 85 mg/l/96h Oncorhynchus mykiss

EC50 - for Crustacea > 130 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants 20 mg/l/72h Pseudokirchneriella subcapitata

Chronic NOEC for Fish 10 mg/l Danio rerio

Chronic NOEC for Crustacea 53 mg/l Daphnia magna

DIISOPROPANOL-PARA-TOLUIDINE

LC50 - for Fish 17 mg/l/96h Brachydanio rerio

EC50 - for Crustacea 28.8 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants 245 mg/l/72h Desmodesmus subspicatus

Chronic NOEC for Algae / Aquatic Plants 57.8 mg/l Desmodesmus subspicatus

12.2. Persistence and degradability

12. Ecological information ... / >>

METHACRYLIC ACID
Rapidly degradable

STYRENE

Solubility in water 320 mg/l
Rapidly degradable

DIISOPROPANOL-PARA-TOLUIDINE

Solubility in water 7000 mg/l
NOT rapidly degradable

12.3. Bioaccumulative potential

METHACRYLIC ACID

Partition coefficient: n-octanol/water 0.93

BCF 1

STYRENE

Partition coefficient: n-octanol/water 2.96

BCF 74

DIISOPROPANOL-PARA-TOLUIDINE

Partition coefficient: n-octanol/water 2.1

12.4. Mobility in soil

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

14.2. UN proper shipping name

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

14. Transport information ... / >>

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 Special provision: -	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo: Passengers: Special provision:	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

TSCA:

All components of this product are listed on US Toxic Substances Control Act (TSCA) Inventory or are exempt from the listing / notification requirements.

Clean Air Act Section 112(b):
100-42-5 STYRENE

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.

15. Regulatory information ... / >>

DEA List II Chemicals (Essential Chemicals):

No component(s) listed.

EPA List of Lists:

313 Category Code:

100-42-5 STYRENE

EPCRA 302 EHS TPQ:

No component(s) listed.

EPCRA 304 EHS RQ:

No component(s) listed.

CERCLA RQ:

100-42-5 STYRENE

EPCRA 313 TRI:

100-42-5 STYRENE

RCRA Code:

No component(s) listed.

CAA 112 (r) RMP TQ:

No component(s) listed.

State Regulations

Massachusetts:

79-41-4 METHACRYLIC ACID
102-71-6 2,2',2"-NITRILOTRIETHANOL
7631-86-9 AMORPHOUS SILICATE HYDRATE
100-42-5 STYRENE

Minnesota:

79-41-4 METHACRYLIC ACID
102-71-6 2,2',2"-NITRILOTRIETHANOL
7631-86-9 AMORPHOUS SILICATE HYDRATE
100-42-5 STYRENE

New Jersey:

79-41-4 METHACRYLIC ACID
102-71-6 2,2',2"-NITRILOTRIETHANOL
100-42-5 STYRENE

New York:

100-42-5 STYRENE

Pennsylvania:

79-41-4 METHACRYLIC ACID
102-71-6 2,2',2"-NITRILOTRIETHANOL
7631-86-9 AMORPHOUS SILICATE HYDRATE
100-42-5 STYRENE

California:

79-41-4 METHACRYLIC ACID
7631-86-9 AMORPHOUS SILICATE HYDRATE
100-42-5 STYRENE

Proposition 65:

WARNING! This product contains chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

100-42-5 STYRENE

NSRL / MADL (µg/day)

Hazard type	NSRL / MADL (µg/day)	Oral	Dermal	Inhalation	Intravenous	Note
Carcinogenicity	27					-

International Regulations

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

15. Regulatory information ... / >>

Substances subject to the Rotterdam Convention:
 None

Substances subject to the Stockholm Convention:
 None

16. Other information

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

H226	Flammable liquid and vapour.
H361	Suspected of damaging fertility or the unborn child.
H300	Fatal if swallowed.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
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:

- 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
- ATE: Acute Toxicity Estimate
- CAA 112 ® RMP TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
- CAS: 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: Regulation (EC) 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
- REACH: Regulation (EC) 1907/2006
- 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: 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. 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

16. Other information ... / >>

- 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 Department 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.

CALCULATION METHODS FOR CLASSIFICATION

Product classification derives from criteria established by the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200), 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:

10.