

Tenax Spa	Revision nr. 3 Dated 04/07/05
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Safety Data Sheet

1. Identification of the substance / preparation and the Company

1.1 Identification of the substance or preparation

Code: CRYSTALLIQUID
Product name: CRYSTAL LIQUID

1.2 Use of the substance / preparation

1.3 Company identification

Name: Tenax Spa
Full address: via I Maggio 226
District and Country: 37020 Volargne (VR) Italy
Tel. 045/6860222
Fax 045/6862456

1.4 Emergency telephone

For urgent inquiries refer to: tenax@tenax.it
<http://www.tenax.it>

2. Composition / Information on ingredients

Contains:

Name	Concentration C	Classification
STYRENE	29,2 <= C < 31,7	R 10
Cas No 100-42-5		Xn R 20
CE No 202-851-5		Xi R 36/38
Index No 601-026-00-0		

The complete text of -R- phrases is specified in section 16.

3. Hazards Identification

3.1 Substance/Preparation Classification

This preparate is dangerous under 67/548/EEC and 1999/45/EC regulations and subsequent amendments. Therefore, this preparate requires a safety data sheet according to the 91/155/EC regulation and subsequent amendments. Further information on health and/or environmental hazards can be found in sections 11 and 12 of this sheet.

Danger Symbols: Xn
Phrases R: 10-20-36/38

3.2 Danger Identification

Because of its chemical-physical features, this product is graded as flammable (flash-point 21 °C or higher and 55 °C or lower).
HARMFUL BY INHALATION.
IRRITATING TO EYES AND SKIN.

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4. First aid measures

EYES: Irrigate copiously with clean, fresh water for at least 15 minutes. Seek medical advice.

SKIN: Wash immediately with plenty of water. Remove contaminated clothing. If irritation persists, seek medical attention. Wash contaminated clothing before using them again.

INHALATION: Remove to open air. If breathing is irregular, seek medical advice.

INGESTION: Obtain immediate medical attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person.

5. Fire-fighting measures

Closed containers exposed to the heat of a fire may lead to pressure rise and explode. For information on environmental and health risks, protection of the respiratory airways, ventilation and individual protective measures, refer to the other sections of this sheet.

Extinguishing measures: CO₂, foam, chemical powder for flammable liquids. Water may not be effective to extinguish the fire, nevertheless it should be used to cool the containers exposed to flames and prevent fires and explosions. For leakage and spillage that have not caught fire, nebulized water may be used to disperse the flammable vapours and protect the people involved in stopping the leakage.

Equipment: wear equipment complete with helmet and face shield and protection of the neck, selfbreathing apparatus at pressure or demand, insulative jacket and trousers, with bands around the arms, legs and waist.

6. Accidental release measures

Exclude sources of ignition. Cover with inert absorbent material. Collect spillages by means of sparkproof equipment. Use water only to remove residuals, so as not to run the risk of entering the sewer.

Do not let the product dry. Contaminated clothes must be left to soak in water before washing. In order to choose safety measures and protection equipment, please see the other sections of this sheet.

Spillage in waters: remove the liquid from the surface with flameproof pumps or manual pumps or suitable absorbent material. Resort to sinking and/or dispersion of the product with suitable substances in open waters, if permitted by the law.

7. Handling and storage

Store in a well ventilated place, keeping the containers closed when not used. Do not smoke while handling. Keep far away from sources of heat, naked flames and sparks and other sources of ignition.

8. Exposure control / personal protection.

STYRENE

- TLV TWA 85 mg/m³ ACGIH

- TLV STEL 170 mg/m³ ACGIH

TLV of solvent mixture: 85 mg/mc

In order to minimize exposure as far as possible, it is strongly recommended to use adequate individual protective measures, such as: masks suitable for the product, goggles, gloves and overall. Do not eat, drink or smoke while handling it. Accurately wash the hands with soap and water before meals and at the end of the work shift.

9. Physical and chemical properties

Colour	TRASPARENT
Odour	TYPICAL
Appearance	LIQUID
Solubility	NOT SOLUBLE IN WATER
Viscosity	1500-1700
Vapour density	N.A.

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Evaporation speed	N.A.
Comburent properties	N.A.
Partition coefficient: n-octanol/water	N.A.
pH	N.A.
Boiling point	N.A.
Flash point	> 21 °C
Explosive properties	N.A.
Vapour pressure	N.A.
Specific gravity	1,1 Kg/l
VOC:	30,00 % - 330,00 g/litre of preparation
VOC (volatile carbon) :	27,65 % - 304,18 g/litre of preparation

10. Stability and reactivity

The product can decompose and/or violently react.

Styrene easily polymerizes above 65 °C with the risk of causing fire and explosions; it is added to an inhibitor which needs a small quantity of dissolved oxygen melted at temperatures < 25 °C. Avoid oxidizing agents; it dissolves different types of plastic materials except polychloroprene and alcohol polyvinyl (ref. Fiche toxicologique, 1992, N. 2).

11. Toxicological information

Acute effects: inhalation of this product is harmful. This product may irritate mucosae, the upper respiratory tract, eyes and skin. Exposure symptoms may include: stinging and irritated eyes, mouth, nose, throat; cough, respiratory disorders, dizziness, headache, nausea and sickness.

In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema and irritation, chemical pneumonia and pulmonary edema. Ingestion of even small amounts of product may cause health problems (stomach pain, nausea, sickness, diarrhoea).

Styrene: possibly carcinogenic in humans according to IARC (group 2B), but despite the cases of leukemia encountered in subjects exposed to styrene, it is not possible to draw any conclusions on the role of this substance from the cancerogenic, teratogenic and mutagenic standpoint.

Acute toxicity following inhalation at 1000 ppm involves the central nervous system with headache and dizziness, lack of coordination; irritation of the mucous membranes of the eyes and respiratory airways occurs at 500 ppm concentrations.

Chronic exposure produces depression of the Central and peripheral nervous system with loss of memory, headache and somnolence starting at 20 ppm; digestive disorders with nausea and loss of appetite; irritation of the respiratory airways with chronic bronchitis and dermatosis.

12. Ecological information

Use this product according to good working practices. Avoid litter. Inform the competent authorities, should the product reach waterways or sewers or contaminate soil or vegetation.

Styrene is biodegradable (ref. Jetoc, Information sheet, 1984).

13. Disposal consideration

Consider the possibility of burning the product in a suitable incinerator. Acid or basic products must always be neutralized before undergoing any treatment, including biological treatment whenever feasible. If the waste is solid, it can be disposed of in a landfill.

14. Transport information

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations. These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

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Road and rail transport:

ADR: 3 UN: 1866
Packing Group: III
Label: 3
Nr. Kemler: 30
Proper Shipping Name: Resin solution
Special Provision: 640E

Carriage by sea (shipping):

IMO class: 3 UN: 1866
Packing Group: III
Label: 3
EMS: F-E, S-E
Marine Pollutant
Proper Shipping Name: Resin solution

Transport by air:

IATA: 3 UN: 1866
Packing Group: III
Label: 3

Cargo:

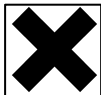
Packaging instructions: 310 Maximum quantity: 220 L

Pass.:

Packaging instructions: 309 Maximum quantity: 60 L

15. Regulatory information

Xn



HARMFUL

- R10 FLAMMABLE.
- R20 HARMFUL BY INHALATION.
- R36/38 IRRITATING TO EYES AND SKIN.
- S 9 KEEP CONTAINER IN A WELL-VENTILATED PLACE.
- S13 KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.
- S25 AVOID CONTACT WITH EYES.
- S26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
- S37 WEAR SUITABLE GLOVES.
- S43 IN CASE OF FIRE USE DUST, CARBON DIOXIDE, FOAM, SPRAYED WATER. DO NOT USE WATER DIRECTLY.

Contains:
STYRENE

Danger labelling under regulations 67/548/EEC and 1999/45/EC and following amendments and adjustments.

Workers exposed to this chemical agent must undergo health checks according to regulation 98/24/EC.

16. Other information

Text of -R- phrases quoted in section 2 of the sheet.

R 10 FLAMMABLE.
R 20 HARMFUL BY INHALATION.
R 36/38 IRRITATING TO EYES AND SKIN.

GENERAL BIBLIOGRAPHY

1. Regulation 1999/45/CE and following amendments;
2. Regulation 67/548/CEE and following amendments and adjustments (technical adjustment XXIX);
3. Regulation 91/155/CEE and following amendments;
4. The Merck Index. - 10th Edition;
5. Handling Chemical Safety;
6. Niosh - Registry of Toxic Effects of Chemical Substances;
7. INRS - Fiche Toxicologique (toxicological sheet);
8. Patty - Industrial Hygiene and Toxicology;
9. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition;

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.

Changes to previous review

The following sections were modified:

01 / 08 / 09 / 11 / 15