

MATERIAL SAFETY DATA SHEET
3,3-DIMETHYL-1,2-EPOXYBUTANE 95%

Section 1 - Chemical Product and Company Identification

MSDS Name:	3,3-DIMETHYL-1,2-EPOXYBUTANE 95%
Catalog Numbers:	1.26
Synonyms:	tert-Butyloxirane, 2-tert-Butyloxirane
Company Identification:	Tau-Chem, Ltd. Nobelova 34, P.O. Box 29 836 05 Bratislava, Slovak Republic Phone: +421 2 44 452 252 Fax: +421 2 44 457 645
Relevant identified uses of substance or mixture and uses advised against	
Identified uses	Laboratory chemicals, Manufacture of substances
POISON CENTER:	National Toxicological Information Centre Limbová 5, 833 05 Bratislava,
Emergency Numbers Slovakia:	Phone: +421 2 54 774 166 Fax: +421 2 54 774 605

Section 2 - Hazards Identification

Classification of the substance or mixture

Labeling according to Regulation (EC) No 1272/2008 [CLP]

Flammable liquids (Category 3)

Eye irritation (Category 2)

Skin Irritation (Category 2)

According to European Directive 67/548/EEC as amended.

Flammable liquid. Irritating to eyes, respiratory system and skin.

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

H225

Highly flammable.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

P280

Wear protective gloves/ protecting clothing/ eye protection/face protection.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
Continue rinsing.

P337+P313

If eye irritation persists: Get medical advice/attention.

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard symbol(s)

According to European Directive 67/548/EEC as amended

F, Xn



R-phrases(s)

R11

Highly flammable.

R36/37/38

Irritating to eyes, respiratory system and skin.

S-phrases(s)

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37

Wear suitable gloves.

Other hazards

None.

Section 3 – Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
2245-30-9	3,3-DIMETHYL-1,2-EPOXYBUTANE	95	218-831-4

Classification Flam. Liq. 3; Eye Irrit.2; Skin Irrit. 2
H225, H319, H335, H315
F, Xi, R11-R36/37/38

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4 – First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 – Fire Fighting Measures

Suitable extinguishing media:	Carbon dioxide (CO ₂), dry powder or water jet.
Special protective equipment for fire-fighters:	Wear self contained apparatus breathing apparatus for fire fighting if necessary.

Section 6 – Accidental Release Measures

Personal precautions:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Environmental precautions:	Prevent further leakage or spillage if safe to do. Do not let product enter drains.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material and dispose of as a hazardous waste. Do not flush with water. Keep in suitable container for disposal according to local regulations. (See section 13)

Section 7 – Handling and Storage

Precautions for safe handling:	Avoid inhalation of vapor or mist. Keep away from sources of ignition. – No smoking. Take measures to prevent to build up of electrostatic charge. Use spark-proof tool, sand explosion proof equipment. Fumes can combine with air to form an explosive mixture.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed. Keep away from sources of ignition.

Section 8 – Exposure Controls, Personal Protection

Personal protective equipment:

Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection	The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.
Eye protection:	Face shield and safety glasses.
Skin and body protection:	Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9 – Physical and Chemical Properties

Appearance

Form: Liquid
Colour: Colourless

Safety data:

pH Not available
Melting Point: Not available
Boiling Point: 95 – 96°C/ 760 mm Hg
Flash Point: - 1°C – closed cup
Ignition temperature: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Solubility in water: Not available
Gravity/ Density: 0.822 g/cm³
Refractive index: 1.3995 – 1.4015
Molecular Formula: C₆H₁₂O
Molecular Weight: 100.16 g/mol

Section 10 – Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions.
Conditions to Avoid: Heat.
Materials to avoid: Oxidizing agents.
Hazardous Decomposition Products: Hazardous decomposition products under fire conditions.
– Carbon oxides.

Section 11 – Toxicological Information

Acute toxicity No data available
Skin corrosion/irritation Irritant for skin and mucous membranes.
Serious eye damage/eye irritation Irritant effect.
Respiratory or skin sensitization No sensitizing effect known.
Germ cell mutagenicity Mutagenic effects have been observed on tests with bacteria.
Carcinogenicity:
IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity: No data available
Specific target organ toxicity – single exposure Inhalation – May cause respiratory irritation.
Specific target organ toxicity – repeated exposure No data available
Aspiration hazard No data available

Potential health effect:

Inhalation	Harmful if inhaled. Irritant for mucous membranes.
Ingestion	Irritant effects.
Skin	Irritating for skin.
Eyes	Irritating for eyes.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Not available.

Section 12 – Ecological Information

Toxicity:	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
PBT and vPvB assessment	No data available
Other adverse effects	No data available

Section 13 – Disposal Considerations

Product	This material may be burned in a chemical incinerator equipped with an afterburner and a scrubber. Observe all federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

Section 14 – Transport Information

	IATA	IMDG	RID/ADR
Shipping Name:	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.	FLAMMABLE LIQUID, N.O.S.
Hazard Class:	3	3	3
UN Number:	1993	1993	1993
Packing Group:	II	II	II
		EMS No: F-E; S-E Marine pollutant: No	

Section 15 – Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

Section 16 – Other Information

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Flam. Liq.	Flammable liquids.
Eye Irrit.	Eye irritation.
Skin Irrit.	Skin irritation.
H225	Highly flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
F	Flammable.
Xi	Irritant.
R11	Highly flammable.
R36/37/38	Irritating to eyes, respiratory system and skin.

MSDS Creation Date: 24/6/2008

Revision #1 Date:25/11/2010

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Disclaimer:

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.