



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: meso-1,2:3,4-Diepoxybutane
Product code: D3410
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Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the GHS

PHYSICAL HAZARDS

Flammable liquids

Category 3

HEALTH HAZARDS

Acute toxicity (Oral)

Category 3

Acute toxicity (Dermal)

Category 2

Acute toxicity (Inhalation)

Category 1

Skin corrosion/irritation

Category 2

Serious eye damage/eye irritation

Category 2A

Germ cell mutagenicity

Category 1B

Carcinogenicity

Category 2

Specific target organ toxicity

Respiratory tract irritation

- Single exposure [Category 3]

ENVIRONMENTAL HAZARDS

Not classified

GHS label elements

Pictograms or hazard symbols



Signal word

Hazard statement

Danger

Flammable liquid and vapour

Toxic if swallowed

Fatal in contact with skin

Fatal if inhaled

Causes skin irritation

Causes serious eye irritation

May cause genetic defects

Suspected of causing cancer

May cause respiratory irritation

Precautionary statements

2. HAZARDS IDENTIFICATION

[Prevention]

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against ignition by the static discharge and the spark.
Do not breathe.
Do not get in eyes, on skin, or on clothing.
Use only outdoors or in a well-ventilated area.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Wear respiratory protection.

[Response]

Wear protective gloves and eye/face protection.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If skin irritation occurs: Get medical advice/attention.
Remove/Take off immediately all contaminated clothing.
Wash contaminated clothing before reuse.

[Storage]

Immediately call a POISON CENTER or doctor/physician.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

[Disposal]

Dispose of contents/container through a waste management company authorized by the local government

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Component(s):	meso-1,2:3,4-Diepoxybutane
Percent:	>97.0%(GC)
CAS Number:	564-00-1
Synonyms:	Erythritol Anhydride
Chemical Formula:	C ₄ H ₆ O ₂

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Ingestion:	Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, water spray, carbon dioxide.
Extinguishing media not to be used:	Solid streams of water

5. FIRE-FIGHTING MEASURES

Specific methods:

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.

Special protective equipment for firefighters:

When extinguishing fire, be sure to wear personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions:

Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

Prevention of secondary hazards:

Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

7. HANDLING AND STORAGE

Handling

Technical measures:

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapor or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling.

Use a closed system if possible. Use a ventilation, local exhaust if vapor or aerosol will be generated.

Advice on safe handling:

Avoid all contact!

Storage

Storage conditions:

Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up.

Store away from incompatible materials such as oxidizing agents.

Packaging material:

Law is followed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:

Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection:

Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection:

Impervious gloves.

Eye protection:

Safety goggles. A face-shield, if the situation requires.

Skin and body protection:

Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):

Liquid

Form:

clear

Color:

Colorless - Slightly pale yellow

Odor:

No data available

pH:

No data available

Melting point/freezing point:

-19 °C

Boiling Point/Range:

138 °C

Flash Point:

No data available

Explosive limits

Lower:

No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Upper: No data available
Density: 1.11
Solubility: Soluble in : Water

10. STABILITY AND REACTIVITY

Stability: Stable under proper conditions.
Reactivity: No special reactivity has been reported.
Incompatible materials: oxidizing agents
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: No data available
Skin corrosion/irritation: No data available
Serious eye damage/irritation: No data available
Germ cell mutagenicity: mmo-sat 100 ug/plate (+S9)
mmo-sat 33300 ng/plate (-S9)
Carcinogenicity: skn-mus TDLo:26 g/kg/22W-I
IARC = Group 2B (Possibly carcinogenic to humans) .
NTP = No data available
Reproductive toxicity: No data available
RTECS Number: EJ8750000

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Fish: No data available
Crustacea: No data available
Algae: No data available
Persistence / degradability: No data available
Bioaccumulative potential(BCF): No data available
Mobility in soil
log Pow: No data available
Soil adsorption (Koc): No data available
Henry's Law constant(PaM³/mol): No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class: 6.1: Toxic substance.
Subsidiary risk: 3: Flammable liquid.
UN-No: 3384
Proper shipping name: Toxic by inhalation liquid, flammable, n.o.s.

15. REGULATORY INFORMATION

Safe management ordinance of dangerous chemical product (State Council announces on January 26, 2002): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

16. OTHER INFORMATION

The reference company name of written contents
Company: TCI (Shanghai) DEVELOPMENT CO., LTD.

16. OTHER INFORMATION

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