

ROSS CHEM COMPANY LIMITED.

Revision number: 1.1

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Propylene Oxide
Company: ROSS CHEM COMPANY LIMITED
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Responsible Department: Sales Department
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Revision number: 1.1

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids Category 1

HEALTH HAZARDS

Acute toxicity (Oral) Category 4
Acute toxicity (Dermal) Category 3
Acute toxicity (Inhalation) Category 3
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Skin sensitization Category 1
Germ cell mutagenicity Category 1B
Carcinogenicity Category 1B
Reproductive toxicity Category 2
Specific target organ toxicity
- Single exposure [Category 3] Respiratory tract irritation, Narcotic effects

ENVIRONMENTAL HAZARDS

Acute aquatic hazard Category 3

Label elements

Pictograms or hazard symbols



Signal word

Hazard statements

Danger
Extremely flammable liquid and vapour
Harmful if swallowed
Toxic in contact with skin or if inhaled
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
May cause respiratory irritation
May cause drowsiness or dizziness
Harmful to aquatic life

Precautionary statements

[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 and hot surfaces. -No smoking.
 Keep container tightly closed.
 Ground and bond container and receiving equipment.
 Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
 Avoid breathing mist, vapors or spray.
 Use only outdoors or in a well-ventilated area.
 Avoid release to the environment.
 Do not eat, drink or smoke when using this product.
 Contaminated work clothing should not be allowed out of the workplace.
 Wash hands and face thoroughly after handling.

[Response]

Wear protective gloves, protective clothing, face protection.
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor if you feel unwell. Take off immediately all contaminated clothing and wash it before reuse.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.
 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 or attention.
 IF exposed or concerned: Get medical advice or attention.

[Storage]

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

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.
 May form explosive peroxides.

Other hazards which do not result in classification

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Substance
Components:	Propylene Oxide
Percent:	>99.0%(GC)
CAS RN:	75-56-9
Synonyms:	1,2-Epoxypropane
Chemical Formula:	C ₃ H ₆ O

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. 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. Get medical advice/attention.
Ingestion:	Get medical advice/attention. 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, carbon dioxide.
Unsuitable extinguishing media:	Water (It may scatter and spread fire.)
Precautions for firefighters:	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**Precautions for safe handling**

Technical measures:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour 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 vapour or aerosol will be generated.
Advice on safe handling:	Avoid all contact! Confirm in advance if peroxides exist when operations involving heating such as distillation are carried out.

Conditions for safe storage, including any incompatibilities

Storage conditions:	Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store under inert gas. Store locked up. Store away from incompatible materials such as oxidizing agents. Air-sensitive
Packaging material:	Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Install a closed system or local exhaust. Also install safety shower and eye bath.
Exposure limits:	
ACGIH TLV(TWA):	2 ppm (sen)
OSHA PEL(TWA):	100 ppm
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
Colour:	Colorless - Almost colorless
Odour:	Sweet
pH:	No data available
Melting point/freezing point:	No data available
Boiling point/range:	34°C
Flash point:	-37°C
Flammability or explosive limits:	
Lower:	2%
Upper:	38.5%
Vapour pressure:	59kPa/20°C
Vapour density:	2.0
Relative density:	0.83
Solubility(ies):	
[Water]	Soluble (41g/100mL, 20°C)
[Other solvents]	
Miscible:	Methanol, Benzene, Acetone, Carbon tetrachloride
Soluble:	Alcohols
Log Pow:	0.03
Autoignition temperature:	449°C

10. STABILITY AND REACTIVITY

Chemical stability:	May form explosive peroxides.
Possibility of hazardous reactions:	No special reactivity has been reported.
Conditions to avoid:	Spark, Open flame, Static discharge, Air
Incompatible materials:	Oxidizing agents, Acids, Bases, Copper, Copper alloys
Hazardous decomposition products:	Carbon dioxide, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	ihl-rat LC50:4000 ppm/4H ipr-rat LD50:150 mg/kg orl-rat LD50:380 mg/kg skn-rbt LD50:1500 uL/kg
Skin corrosion/irritation:	skn-rbt 415 mg open MOD
Serious eye damage/irritation:	eye-rbt 20 mg SEV
Germ cell mutagenicity:	mmo-esc 700 ug/plate (+/-S9) mmo-sat 350 ug/plate (+S9) mmo-sat 700 ug/plate (-S9) sce-hmn-lym 25000 ppm
Carcinogenicity:	ihl-mus TCLo:400 ppm/6H/2Y-I ihl-rat TCLo:100 ppm/7H/2Y-I orl-rat TDL0:10798 mg/kg/2Y-I scu-rat TDL0:1500 mg/kg/46W-I
IARC =	Group 2B (Possibly carcinogenic to humans)
NTP =	b (Reasonably anticipated to be carcinogens)
Reproductive toxicity:	ipr-rat TDL0:47 mg/kg (1D male) ihl-mky TCLo:100 ppm/7H (2Y male) ihl-rat TCLo:500 ppm/7H (7-16D preg)
RTECS Number:	TZ2975000

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

Fish:	No data available
Crustacea:	No data available
Algae:	No data available
Persistence / degradability:	96% (by BOD) , 86% (by TOC) , 89% (by GC)
Bioaccumulative potential(BCF):	3
Mobility in soil	
Log Pow:	0.03
Soil adsorption (Koc):	25
Henry's Law (PaM³/mol):	7.1

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 but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

14. TRANSPORT INFORMATION

Hazards Class:	3: Flammable liquid.
UN-No:	1280
Proper shipping name:	Propylene oxide
Packing group:	I

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

This product is included in the list of dangerous chemicals(2015)/Serial No.: 979

16. OTHER INFORMATION**The reference company name of written contents**

Company:	ROSS CHEM COMPANY LIMITED.
Address:	No. 227.NanYi Road, Dongying City, Shandong Province, China 257091
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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.