

Safety Data Sheet

Product No. 18601 Propylene Oxide

Issue Date (05-19-15)

Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: Propylene Oxide

Synonym: Methyloxirane, 1-2 Epoxypropane, Methyl Ethylene Oxide, Propylene Epoxide

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

GHS Pictograms



GHS02 GHS08 GHS07

GHS Categories

GHS02 – Flammable

Flam. Liq. 1 H224 : Extremely flammable liquid and vapor

GHS08 – Health

Muta. 1B H340: May cause genetic effects

Carc. 1B H350: May cause cancer

GHS07 - Irritant

Acute Tox. 4 H302: Harmful if swallowed

Acute Tox. 4: H312: Harmful in contact with skin

Acute Tox. 4: H332: Harmful if inhaled

Skin Irrit. 2: H315: Causes skin irritation

Eye Irrit. 2: H319: Causes serious eye irritation

STOT SE 3: H335: May cause respiratory irritation

2.2 Label elements

Hazard pictograms



GHS02



GHS07



GHS08

Hazard-determining components of labeling: Propylene oxide

Signal Word: DANGER

Hazard statements

H224 Extremely flammable liquid and vapor.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H340 May cause genetic defects.

H350 May cause cancer.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Toxic: Carc. Cat. 2, Muta. Cat. 2 - May cause cancer. May cause heritable genetic damage.

Harmful: Harmful by inhalation, in contact with skin and if swallowed.

Irritant: Irritating to eyes, respiratory system and skin.

Extremely flammable

Information concerning particular hazards for human and environment: NA

Risk phrases:

May cause cancer.

May cause heritable genetic damage.

Extremely flammable.

Also harmful by inhalation, in contact with skin and if swallowed.

Irritating to eyes, respiratory system and skin.

Safety phrases:

Avoid exposure - obtain special instructions before use.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Health Effects:

HMIS® Hazard Rating: Health: 2; Fire: 4; Reactivity: 2

NFPA Hazard Rating: Health: 2; Fire: 4; Reactivity: 2

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment: A Chemical Safety Assessment has not been carried out.

PBT: Not applicable.

vPvB: Not applicable.

Emergency overview

Appearance: Clear liquid.

Immediate effects: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Potential health effects: May cause genetic defects.

Primary Routes of entry: Inhalation, ingestion, and skin and eye contact.

Signs and Symptoms of Overexposure: ND

Eyes: Irritating to eyes.

Skin: Harmful and irritating with contact with skin.

Ingestion: Harmful if swallowed.

Inhalation: Harmful by inhalation. Irritating to respiratory system.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen: May cause cancer or heritable genetic damage.

See Toxicological Information (Section 11)

Potential environmental effects

See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP	IARC	OSHA regulated
*Propylene oxide (75-56-9) EC number: 200-879-2 Index number: 603-055-00-4	≤100	240 100 ppm	ND	R	2B	No

*SVHC 75-56-9 propylene oxide

Section 4: First Aid Measures

If accidental overexposure is suspected

General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Eye(s) Contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Skin Contact: Immediately wash with water and soap and rinse thoroughly.

Inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

Ingestion: Immediately call a doctor.

Note to physician

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: -37 °C (-35 °F)

Ignition Temperature: 130 °C

Flammable Limits: Lower: 1.9 Vol %, Upper: 15 Vol %

Auto-ignition point: ND

Fire Extinguishing Media: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special Fire Fighting Procedures: Mouth respiratory protective device.

Unusual Fire and Explosion Hazards: Product is not explosive. However, formation of explosive air/vapor mixtures is possible.

Hazardous combustion products: Oxides of carbon.

DOT Class: Flammable.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:

Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.

Environmental precautions: Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage

Precautions to be taken in Handling and Storage:

Handling: Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. Keep ignition sources away. Do not smoke. Protect against electrostatic charges. Keep respiratory protective device available.

Storage: Keep receptacle tightly sealed. Do not gas tight seal receptacle. Store in cool, dry conditions in well-sealed receptacles. Protect from heat and direct sunlight.

Storage temperature: Store in a cool location.

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Control parameters - Components with limit values that require monitoring at the workplace:

WEL Long-term value: 12 mg/m₃, 5 ppm. Carc.

Engineering Controls

Ventilation required: Use in chemical fume hood.

Personal Protection Equipment

General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.

Respiratory protection: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Skin protection: Wear protective gloves and clothing.

Eye protection: Tightly-sealed goggles.

Additional clothing and/or equipment: Shower or eye wash station.

Exposure Guidelines

See Composition/Information on Ingredients (Section2)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Colorless liquid.

Odor (threshold): Ether-like (ND)

Specific Gravity (H₂O=1): 0.8313 g/cm³

Vapor Pressure (mm Hg): 443 mm Hg

Vapor Density (air=1): ND

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND

Boiling Point: 34 °C (93 °F)

Melting point: -111.9 °C (-169 °F)

pH: ND

Solubility in Water: 405 g/l

Molecular Weight: ND

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: ND

Materials to Avoid (Incompatibility): ND

Hazardous Decomposition Products: None known.

Hazardous Polymerization: ND

Section 11: Toxicological Information

Results of component toxicity test performed:

Acute toxicity: LD/LC50 values relevant for classification:

75-56-9 Propylene oxide

Oral	LD50	380 mg/kg (Rat)
Dermal	LD50	1245 mg/kg (Rabbit)

Primary irritant effect:

On the skin: Irritant to skin and mucous membranes.

On the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information: ND

Human experience: ND

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen. Propylene Oxide is a possible cancer hazard (see section 3 and 15).

Section 12: Ecological Information

Ecological Information

Aquatic toxicity: ND

Persistence and degradability: ND

Bioaccumulative potential: ND

Mobility in soil: ND

Additional ecological information: Water hazard class 3 (German regulation) (Self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: ND

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Information: Proper shipping name: Propylene oxide

Hazard Class: 3

Packaging group: I

UN Number: UN1280

IATA: Proper shipping name: Propylene oxide

Hazard Class: 3

Packing group: I

UN Number: UN1280

Marine Pollutant: No

Canadian TDG: Propylene oxide

Section 15: Regulatory Information

United States Federal Regulations

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: Section 355 (extremely hazardous substances): Substance is listed.

SARA Title III: Section 313 (Specific toxic chemical listings): Substance is listed.

RCRA: ND

TSCA: Substance is listed.

CERCLA: ND

State Regulations

California Proposition 65: Chemicals known to cause cancer: Substance is listed.

Chemicals known to cause reproductive toxicity for females: Substance is not listed.

Chemicals known to cause reproductive toxicity for males: Substance is not listed.

Chemicals known to cause developmental toxicity: Substance is not listed.

Carcinogenic categories:

EPA (Environmental Protection Agency): 75-56-9 propylene oxide, B2.

TLV (Threshold Limit Value established by ACGIH): 75-56-9 propylene oxide, A3.

NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is listed.

OSHA-Ca (Occupational Safety & Health Administration): Substance is not listed.

International Regulations

Canada WHMIS: ND

Europe EINECS Numbers: 200-879-2

Section 16: Other Information

Label Information: Flammable, Toxic.

European Risk and Safety Phrases: See Section 2

European symbols needed: ND

Canadian WHMIS Symbols: ND

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.