

Technical Bulletin

HUNTSMAN

PROPYLENE OXIDE – URETHANE GRADE

GENERIC NAMES	oxirane, methyl ; alkylene oxide
DESCRIPTION	A colorless liquid with an ether-like odor.
APPLICATIONS	A chemical intermediate used in the production of polyether diols and triols for the polyurethane industries; mono, di, tri and polypropylene glycols; and surface-active agents.

SALES SPECIFICATIONS

<u>Property</u>	<u>Specifications</u>	<u>Test Method *</u>
Acidity (as acetic acid), ppm	15 max.	ST-31.41,J
Aldehyde, Total, ppm	50 max.	ST-38.40
Appearance	Clear and substantially free of suspended matter	ST-30.1
Assay, wt % (dry basis)	99.9 min.	By Difference
Color, Pt-Co	5 max.	ST-30.12
Nonvolatile residue, g/100 ml	0.002 max.	ST-1.3
Water, ppm	100 max.	ST-31.53,5
Methanol, ppm	50 max.	

ADDITIONAL INFORMATION:

<u>Typical Properties</u>	<u>Typical Values</u>
Chloride, Total, ppm	10
Distillation Range, 760 mm Hg, Deg, C, IBP	33.0 min.
DP	37.0 max.
Specific Gravity, 20/20 C	0.830
Foam Test, Cup	PASS

* Test methods are available upon request.

PROPYLENE OXIDE – URETHANE GRADE

TYPICAL PROPERTIES

Chemical Properties



Molecular Weight 58

Physical Properties

Chlorides (Inorganic) as Cl, ppm 0.1

Distillation range, 760 mm Hg, Deg. C, IBP 33.0 min.
Deg. C, DP 37.0 max.

Flash point, PMCC, °F -35

Freezing point, °C -104

Refractive index, 20 °C 1.3657

Explosive limits in air, vol.% 2.1 - 38.5

Heat of Vaporization, cal/gm, 760 mm Hg 89

Residual odor None

Specific gravity, 20/20°C 0.830

Specific heat, 20°C, cal/gm/°C 0.51

Vapor pressure, 20°C, mm Hg 455

Viscosity, 20°C, cp 0.33

Water solubility, % >10

Weight, 20°C, lb/gal 6.92

Regulatory Information

DOT Classification Propylene Oxide, Class 3
UN1280, PG I, RQ

Freight Classification Propylene Oxide
OSHA Classification Suspected Carcinogen

HMIS Code 3-4-2

CAS Number 75-56-9

TSCA Inventory listed

WHMIS Classification Class B, Div 2: Flammable liquid

Class D, Div 1, Subdiv. B: Toxic

Class D, Div 2, Subdiv A:

Carcinogenic

Class D, Div 2 Subdiv. B: Skin

sensitizer

Canadian DSL listed

European EINECS listed

Australian AICS listed

Japanese MITI listed

PRODUCT SAFETY POLICY

It is the product safety policy of Huntsman Propylene Oxide Ltd. to provide our customers with information on the safe handling and use of our products. The Material Safety Data Sheet (MSDS) should always be read and understood thoroughly before handling the product, and adequate safety procedures should be followed. Information on the toxicity, environmental, and industrial hygiene aspects of our products may be found in the MSDS. Precautionary measures include: use only with adequate ventilation; avoid breathing vapor, mist or gas; avoid contact with eyes, skin and clothing; keep container closed; wash thoroughly after handling.

HANDLING, STORAGE and SHIPPING

Carbon steel storage tanks and piping are generally satisfactory for handling propylene oxide. No copper or other acetylide-forming metal should be in contact with propylene oxide. Storage tanks should be insulated where practical and a water spray system should be provided. Please contact Huntsman's Technical Services Section for additional information. Product is available in tank cars and single compartment MC-331 tank trucks. Certain government regulations may apply at the time of shipment.

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