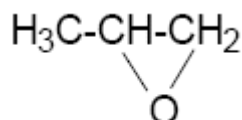


Technical Bulletin

Propylene Oxide – Urethane Grade

Generic: oxirane, methyl; alkylene oxide

STRUCTURE



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

Property	Specifications	Test Method *
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.	ST-35.185

* Methods of test are available from Huntsman upon request.

ADDITIONAL INFORMATION

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
WHMIS Classification	B2, D1B, D2A, D2B
CAS Number	75-56-9

Chemical Control Laws	
Australia, AICS	Listed
Canada, DSL	Listed
Europe, EINECS	Listed
Japan, METI	Listed
United States, TSCA	Listed

Physical Properties	
Chlorides (inorganic) as Cl, ppm	0.1
Distillation range, 760 mmHg, °C, IBP	33.0 min.
Distillation range, 760 mmHg, °C, DP	37.0 max.
Exposure limits in air, vol.%	2.1 – 38.5
Flash point, PMCC, °C (°F)	-37 (-35)
Freezing point, °C (°F)	-104 (-155)
Heat of vaporization, cal/g, 760 mmHg	89
Molecular weight	58
Refractive index, 20°C	1.3657
Residual odor	None
Specific gravity, 20/20°C	0.830
Specific heat, 20°C, cal/g/°C	0.51
Vapor pressure, mmHg, 20°C (68°F)	455
Viscosity, cP, 20°C (68°F)	0.33
Water solubility, %	> 10
Weight, lb/gal, 20°C	6.92

PRODUCT SAFETY POLICY

It is the product safety policy of Huntsman 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 AND STORAGE PRECAUTIONS

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.

Huntsman Polyurethanes
10003 Woodloch Forest Drive,
The Woodlands,
Texas 77380, USA
Tel.: +1-281-719-6000
Fax.: +1-281-719-6416
web: www.huntsman.com/pu

For Your Protection**HEALTH AND SAFETY**

*The Safety and Health information in this data sheet does not contain sufficient detail for safe handling in all cases. For detailed safety and health information refer to the **Material Safety Data Sheet** for this product.*

EMERGENCY CALLS: Huntsman Emergency Response Center: 800-328-8501, 409-722-8381 / CHEMTREC - Spills, Leak, Fire 800-424-9300 (in USA and Canada)

IMPORTANT LEGAL NOTICE: Sales of the products described herein ("Product") are subject to the general terms and conditions of sale of Huntsman Corporation and its affiliates and subsidiaries (collectively, "Huntsman").

To the knowledge, information and belief of Huntsman, all the information and recommendations in this publication are accurate as of the date of publication.

WARRANTY:

Huntsman warrants that at the time and place of delivery all Products sold to a buyer of such Products shall conform to the specifications provided by Huntsman to such buyer of such Products.

DISCLAIMER AND LIMITATION OF LIABILITY:

EXCEPT AS SET FORTH ABOVE, HUNTSMAN MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF ANY THIRD PARTY, OR WARRANTIES AS TO QUALITY OR CORRESPONDENCE WITH PRIOR DESCRIPTION OR SAMPLE, AND ANY BUYER OF PRODUCTS DESCRIBED HEREIN ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE OF SUCH PRODUCT, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER SUBSTANCES. Chemical or other properties purported to be typical of such Products, where stated herein, should be considered as representative of current production and should not be construed to be specifications of any such Products. In all cases, it is the sole responsibility of a buyer to determine the applicability of the information and recommendations contained in this publication and the suitability of any Product for its own particular purpose, and no statements or recommendations made herein are to be construed as a suggestion, recommendation, or authorization to take any action that would infringe any patent or other intellectual property right. A buyer or user of a Product is solely responsible for ensuring that its intended use of such Product does not infringe any third party's intellectual property rights. Huntsman's maximum liability for any claim related to the Products described herein or breach of an agreement associated therewith shall be limited to the purchase price of the Products or portion thereof to which such claim pertains. IN NO EVENT SHALL HUNTSMAN BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO ANY DAMAGES FOR LOST PROFITS OR BUSINESS OPPORTUNITIES OR DAMAGE TO REPUTATION.

WARNING:

The behaviour, hazardousness and/or toxicity of the Products referred to in this publication in manufacturing processes and their suitability in any given end-use environment are dependent upon various conditions such as chemical compatibility, temperature, and other variables, which may not be known to Huntsman. It is the sole responsibility of the buyer or user of such Products to evaluate the manufacturing circumstances and the final Product(s) under actual end-use requirements and to adequately advise and warn future purchasers and users thereof.

Products referred to in this publication may be hazardous and/or toxic and require special precautions in handling. A buyer should obtain Material Safety Data Sheets from Huntsman containing detailed information on hazardousness and/or toxicity of the products contained herein, together with proper shipping, handling and storage procedures, and should comply with all applicable safety and environmental standards. The Product(s) described herein have not been tested for, and is therefore not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for such uses.

Unless otherwise specified, Huntsman shall not be liable for or otherwise have any obligation to a buyer of any Products contained in this publication for any technical or other information or advice furnished by Huntsman in this publication.

Copyright © 2009 Huntsman Corporation. All rights reserved.

For further information, please visit our website at: www.huntsman.com/pu

March 3, 2009