

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING
OF PRODUCT

PRODUCT CODE AND NAME : **PGIND PROPYLENE GLYCOL - INDUSTRIAL**
ISSUE DATE : **07/01/1999**
MSDS CD DATE : **7/1/2000**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL IDENTITY**PRODUCT CODE AND NAME****PGIND PROPYLENE GLYCOL - INDUSTRIAL****Chemical Name and/or Family or Description:**

Glycol

COMPANY INFORMATION

Huntsman ICI Chemicals, LLC
500 Huntsman Way
Salt Lake City, UT 84108

TELEPHONE NUMBERS

Transportation Emergency

Company: (409) 727-0831

CHEMTREC: (800) 424-9300

Medical Emergency: (409) 722-9673 (24 Hour)

General MSDS Assistance: (713) 235-6432

Technical Information: (512) 459-6543

2. COMPOSITION AND INFORMATION ON INGREDIENTS

THE CRITERIA FOR LISTING COMPONENTS IN THE COMPOSITION SECTION ARE AS FOLLOWS: CARCINOGENS ARE LISTED WHEN PRESENT AT 0.1 % OR GREATER; COMPONENTS WHICH ARE OTHERWISE HAZARDOUS ACCORDING TO OSHA ARE LISTED WHEN PRESENT AT 1.0 % OR GREATER; NON-HAZARDOUS COMPONENTS ARE LISTED AT 3.0 % OR GREATER. THIS IS NOT INTENDED TO BE COMPLETE COMPOSITIONAL DISCLOSURE. REFER TO SECTION 14 FOR APPLICABLE STATES' RIGHT TO KNOW AND OTHER REGULATORY INFORMATION.

Product and/or Component(s) Carcinogenic According to:

OSHA IARC NTP OTHER NONE X

Composition:

Chemical Name	CAS Number	Exposure Limits	Range in %
1,2-propanediol	57-55-6		100.00

THIS PRODUCT IS CONSIDERED NON-HAZARDOUS ACCORDING TO OSHA (1910.1200).

PRODUCT CODE AND NAME : **PGIND PROPYLENE GLYCOL - INDUSTRIAL**
ISSUE DATE : **07/01/1999**
MSDS CD DATE : **7/1/2000**
COMPANY : **HUNTSMAN**

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:

Colorless mobile liquid

Odor:

Mild odor

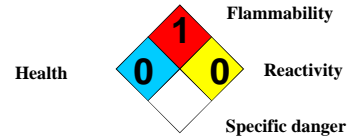
WARNING STATEMENT

CAUTION! ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE

**Hazardous Material
Information System
(United States)**

Health	0
Fire	1
Reactivity	0
Personal protection	0

**National Fire Protection
Association NFPA
(United States)**



POTENTIAL HEALTH EFFECTS

Primary Route of Exposure

Eye X Skin X Inhalation X Ingestion

Effects of Overexposure

Acute:

Eyes: May cause minimal irritation, experienced as temporary discomfort.

Skin: Brief contact is not irritating. Prolonged contact, as with clothing wetted with material, may cause defatting of skin or irritation, seen as local redness with possible mild discomfort.

Other than the potential skin irritation effects noted above, acute (short term) adverse effects are not expected from brief skin contact; see other effects, below, and Section 11 for information regarding potential long term effects.

Inhalation: Vapors or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or as from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headache, nausea, and drowsiness.

Ingestion: If more than several mouthfuls are swallowed, abdominal discomfort, nausea, and diarrhea may occur. Aspiration may occur during swallowing or vomiting resulting in lung damage.

Sensitization Properties: Unknown

Chronic:

No adverse effects have been documented in humans as a result of chronic exposure. Section 11 may contain applicable animal data.

Medical Conditions Aggravated by Exposure:

There is no evidence that this product aggravates an existing medical condition.

Other Remarks:

None

PRODUCT CODE AND NAME : PGIND PROPYLENE GLYCOL - INDUSTRIAL
ISSUE DATE : 07/01/1999
MSDS CD DATE : 7/1/2000
COMPANY : HUNTSMAN

4. FIRST AID MEASURES

Eyes:

Flush eyes with plenty of water for several minutes. Get medical attention if eye irritation persists.

Skin:

Wash skin with plenty of soap and water for several minutes. Get medical attention if skin irritation develops or persists.

Ingestion:

If person is conscious and can swallow, give two glasses of water (16 oz.) but do not induce vomiting. If vomiting occurs, give fluids again. Have medical personnel determine if evacuation of stomach or induction of vomiting is necessary. Do not give anything by mouth to an unconscious or convulsing person.

Inhalation:

If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or respiratory irritation persists.

Other Instructions:

Aspiration of this product during induced emesis may result in severe lung injury. If evacuation of stomach is necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation. Contact a Poison Center for additional treatment information.

5. FIRE-FIGHTING MEASURES

Ignition Temperature - AIT (degrees C):

371.1 (700 F)

Flash Point (degrees C):

100 (212 F) CC

Flammable Limits % (Lower-Upper):

Lower: 2.6
Upper: 12.5

Recommended Fire Extinguishing Agents And Special Procedures:

Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

Unusual or Explosive Hazards:

None

Special Protective Equipment for Firefighters:

No special equipment or procedures required.

6. ACCIDENTAL RELEASE MEASURES (Transportation Spills: CHEMTREC (800)424-9300)

Procedures in Case of Accidental Release, Breakage or Leakage:

Contain spill if possible, contain with absorbent materials such as clay or soil, and shovel up. Avoid skin and eye contact.

PRODUCT CODE AND NAME : PGIND PROPYLENE GLYCOL - INDUSTRIAL
ISSUE DATE : 07/01/1999
MSDS CD DATE : 7/1/2000
COMPANY : HUNTSMAN

7. HANDLING AND STORAGE

Precautions to be Taken in

Handling:

Minimum feasible handling temperatures should be maintained.

Storage:

Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective Equipment (Type)

Eye/Face Protection:

Safety glasses, chemical type goggles, or face shield recommended to prevent eye contact.

Skin Protection:

Workers should wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry-cleaned.

Respiratory Protection:

Airborne concentrations should be kept to lowest levels possible. If vapor, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

Ventilation:

Local exhaust ventilation recommended if generating vapor, dust, or mist. If exhaust ventilation is not available or inadequate, use MSHA or NIOSH approved respirator as appropriate.

Exposure Limit for the Total Product:

None established for product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Colorless mobile liquid

Odor:

Mild odor

Boiling Point (degrees C):

187.2 (369 F)

Melting/Freezing Point (degrees C):

< -60 (< -76 F)

Specific Gravity (water=1):

1.0381

pH:

6

Vapor Pressure:

< 1 mm Hg at 25 C (77 F)

PRODUCT CODE AND NAME : PGIND PROPYLENE GLYCOL - INDUSTRIAL
ISSUE DATE : 07/01/1999
MSDS CD DATE : 7/1/2000
COMPANY : HUNTSMAN

Viscosity:

< 20 cSt at 40 C (104 F)

VOC Content:

28% by ASTM D 2369

Vapor Density (Air=1):

2.6

Solubility in Water (%):

> 10

Other:

None

10. STABILITY AND REACTIVITY

This Material Reacts Violently With:

Air Water Heat Strong Oxidizers Others None of these X

Comments:

None

Products Evolved When Subjected to Heat or Combustion:

Toxic levels of carbon monoxide, carbon dioxide, irritating aldehydes and ketones.

Hazardous Polymerizations:

DO NOT OCCUR

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)

Oral:

LD50 > 5.00 g/kg (rat) practically non-toxic

Inhalation:

Believed to be practically non-toxic

Dermal:

LD50 > 2.00 g/kg (rabbit) practically non-toxic

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES)

Skin:

(Draize) Believed to be < .50 /8.0 (rabbit) no appreciable effect

Eyes:

(Draize)Believed to be < 15.00 /110 (rabbit) no appreciable effect

Sensitization:

Not determined.

Other:

None

PRODUCT CODE AND NAME : PGIND PROPYLENE GLYCOL - INDUSTRIAL
ISSUE DATE : 07/01/1999
MSDS CD DATE : 7/1/2000
COMPANY : HUNTSMAN

12. DISPOSAL CONSIDERATIONS:

Waste Disposal Methods:

This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

Remarks:

None

13. TRANSPORT INFORMATION

Transportation

DOT:

Proper Shipping Name:

Not regulated

Hazard Class:

Not regulated

Identification Number:

Not regulated

Packing Group:

Not regulated

Label Required:

Not regulated

IMDG

Proper Shipping Name:

Not regulated

ICAO

Proper Shipping Name:

Not regulated

TDG

Proper Shipping Name:

Not regulated

Hazard Class:

Not regulated

Identification Number:

Not regulated

Label Required:

Not regulated

PRODUCT CODE AND NAME : PGIND PROPYLENE GLYCOL - INDUSTRIAL
ISSUE DATE : 07/01/1999
MSDS CD DATE : 7/1/2000
COMPANY : HUNTSMAN

14. REGULATORY INFORMATION

Federal Regulations:

SARA Title III:

Section 302/304 Extremely Hazardous Substances

Chemical Name	CAS Number	Range in %	TPQ	RQ
None.				

Section 311 Hazardous Categorization:

Acute	Chronic	Fire	Pressure	Reactive	N/A X

Section 313 Toxic Chemical

Chemical Name	CAS Number	Concentration
None.		

CERCLA 102(a)/DOT Hazardous Substances:

Chemical Name	CAS Number	Range in %	RQ
None.			

States Right-to-Know Regulations:

Chemical Name	State Right-to-know
None.	

State list: CT (Connecticut), FL (Florida), IL (Illinois), MI (Michigan), LA (Louisiana), MA (Massachusetts), NJ (New Jersey), PA (Pennsylvania), RI (Rhode Island)

California Prop. 65:

The following detectable components of this product are substances, or belong to classes of substances, known to the State of California to cause cancer and/or reproductive toxicity.

Chemical Name	CAS Number
None.	

INTERNATIONAL REGULATIONS:

TSCA Inventory Status:

This product, or its components, are listed on, or are exempt from the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

WHMIS Classification:

Not regulated.

Canadian Inventory Status:

This product, or its components, are listed on or are exempt from the Canadian Domestic Substance List (DSL).

EINECS Inventory Status:

This product, or its components, are listed on or are exempt from the European Inventory of Existing Chemical Substances (EINECS) or the European List of Notified Chemical Substances (ELINCS).

Australian Inventory Status:

This product, or its components, are listed on or are exempt from the Australian Inventory of Chemical Substances (AICS).

Japan Inventory Status:

This product, or its components, are listed on or are exempt from the Japanese Ministry of International Trade and Industry (MITI) inventory.

PRODUCT CODE AND NAME : PGIND PROPYLENE GLYCOL - INDUSTRIAL
ISSUE DATE : 07/01/1999
MSDS CD DATE : 7/1/2000
COMPANY : HUNTSMAN

15. ENVIRONMENTAL INFORMATION

Aquatic Toxicity:

LC50-96hr Aquatic toxicity rating is believed to be > 100.00 mg/liter practically nontoxic

Mobility:

Not determined.

Persistence and Biodegradability:

This product is reported to have a moderate ($\geq 30\%$) rate of biodegradation in a test for ready biodegradation.

Potential to Bioaccumulate:

This product is reported to have a low potential to bioconcentrate.

Remarks:

None

16. OTHER INFORMATION 07/01/1999

This product is currently on the FDA's GRAS (generally regarded as safe) list.

Supersedes: 5/20/1997

The following section has been revised: 1

Print Date: 06/09/2000

THE INFORMATION IN THIS DATA SHEET IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT. IT IS PROVIDED FOR THE PURPOSE OF HAZARD COMMUNICATION AS PART OF HUNTSMAN'S PRODUCT SAFETY PROGRAM. IT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY A PROPERLY TRAINED PERSON. YOU ARE ENCOURAGED AND REQUESTED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN. THE DATA RELATES ONLY TO THE SPECIFIC PRODUCT DESIGNATED, AND DOES NOT RELATE TO USE OF THE PRODUCT IN COMBINATION WITH ANY OTHER MATERIAL OR USE OF THE PRODUCT IN ANY PROCESS. THE DATA IS NOT INTENDED TO CONSTITUTE PERFORMANCE INFORMATION CONCERNING THE PRODUCT. NO EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY FOR FITNESS FOR A PARTICULAR PURPOSE IS MADE WITH RESPECT TO THE PRODUCT, ITS COMPOSITION, ITS SAFETY OR THE INFORMATION CONTAINED IN THIS DATA SHEET.

TO DETERMINE THE APPLICABILITY OR THE EFFECTS OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, THE USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENT AGENCY. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.

CURRENT DATA SHEETS ARE AVAILABLE FOR ALL HUNTSMAN PRODUCTS. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL HUNTSMAN PRODUCTS YOU BUY, USE OR DISTRIBUTE BY CALLING (713) 235-6432 OR DIRECTING YOUR INQUIRIES TO:

**HUNTSMAN
COORDINATOR, PRODUCT SAFETY
P.O. Box 27707
HOUSTON, TX 77227-7707**

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, COORDINATOR, PRODUCT SAFETY AT THE ABOVE ADDRESS.

COPYRIGHT © 1999 BY HUNTSMAN CORPORATION. ALL RIGHTS RESERVED.