

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

PRODUCT CODE AND NAME : **JCLE100N JEFFCOOL® E100N**
DATE ISSUED : **04/14/2011**
DATE PRINTED : **04/14/2011**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**MATERIAL IDENTITY****PRODUCT CODE AND NAME****JCLE100N JEFFCOOL® E100N****Chemical Name and/or Family or Description:**

Industrial coolant and/or heat transfer fluid

COMPANY INFORMATION

Huntsman Petrochemical Corporation
P.O. Box 27707
Houston, TX 77227-7707

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-ethanediol (Common Name-Ethylene glycol)	107-21-1	50 ppm CEILING-OSHA 39.4 ppm CEILING-ACGIH (AEROSOL) (A4)	95.00-99.99
Phosphoric acid, dipotassium salt	7758-11-4		1.00-2.99

THIS PRODUCT IS CONSIDERED HAZARDOUS ACCORDING TO OSHA (1910.1200).
REFER TO SECTION 16 OF MSDS FOR PROHIBITED PRODUCT APPLICATIONS.

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3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Appearance:

Clear liquid; may be colored by customer request

Odor:

Mild odor

WARNING STATEMENT

WARNING ! HARMFUL IF SWALLOWED
MAY CAUSE DIZZINESS AND DROWSINESS
MAY CAUSE EYE IRRITATION
ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE
FOR INDUSTRIAL USE ONLY
CAN CAUSE LIVER AND KIDNEY DAMAGE IF SWALLOWED

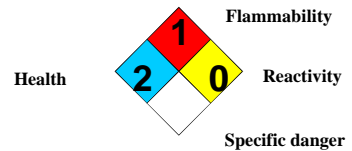
ATTENTION ! CONTAINS ETHYLENE GLYCOL WHICH MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA

THIS PRODUCT IS NOT TO BE USED IN FOOD, DRUG, COSMETIC OR POTABLE WATER APPLICATIONS

Hazardous Material Information System (United States)

Health	2
Fire	1
Reactivity	0
Personal protection	

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 irritation, experienced as mild discomfort and seen as slight excess redness of the eye.

Skin:

Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort, seen as local redness and swelling. 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. Prolonged or repeated overexposure may result in the absorption of potentially harmful amounts of material.

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Ingestion:

Contains ethylene glycol and/or diethylene glycol, which are toxic when swallowed. A lethal dose for an adult is 1-2 ml per kilogram, or about 4 ounces (one-half cup). Symptoms include headache, weakness, confusion, dizziness, staggering, slurred speech, loss of coordination, faintness, nausea and vomiting, increased heart rate, decreased blood pressure, difficulty breathing and seeing, pulmonary edema, unconsciousness, convulsions, collapse, and coma. Symptoms may be delayed. Decreased urine output and kidney failure may also occur. Severe poisoning may cause death.

Aspiration may occur during swallowing or vomiting, resulting in lung damage.

Sensitization Properties: Unknown

Chronic:

Repeated ingestion may cause kidney damage.

Medical Conditions Aggravated by Exposure:

Because of its irritating properties, repeated skin contact may aggravate an existing dermatitis (skin condition). Repeated overexposure may aggravate existing kidney disease.

Other Remarks:

None

4. FIRST AID MEASURES

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.

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, immediately give two glasses of water (16 oz.) but do not induce vomiting. If vomiting occurs, give fluids again. Have physician determine if condition of person will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

Inhalation:

If inhaled, remove to fresh air. If not breathing, clear person's airway and give artificial respiration. If breathing is difficult, qualified medical personnel may administer oxygen. Get medical attention immediately.

Other Instructions:

Ethylene glycol (EG) and diethylene glycol (DEG) intoxication may initially produce behavioral changes, drowsiness, vomiting, diarrhea, thirst, and convulsions. EG and DEG are nephrotoxic. End stages of poisoning may include renal damage or failure with acidosis. Supportive measures, supplemented with hemodialysis if indicated, may limit the progression and severity of toxic effects.

FOR ETHYLENE GLYCOL POISONING intravenous ethanol is a recognized antidotal treatment ; other antidotal treatments also exist for EG poisoning. FOR DIETHYLENE GLYCOL POISONING the role of intravenous ethanol in the treatment is unclear but it may be of benefit in view of structural and toxicological similarities to ethylene glycol. Contact a Poison Center for further treatment information.

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.

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5. FIRE-FIGHTING MEASURES

Ignition Temperature - AIT (degrees C):

Not determined.

Flash Point (degrees C):

126.7 (260 F) (COC)

Flammable Limits % (Lower-Upper):

Lower: Not Determined

Upper: Not Determined

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:

Wear full protective clothing and positive pressure breathing apparatus. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

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

Procedures in Case of Accidental Release, Breakage or Leakage:

Ventilate area. Avoid breathing vapor. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.

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:

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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:

Adequate to meet component occupational exposure limits (see Section 2).

Exposure Limit for the Total Product:

None established for product; refer to Section 2 for component exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Clear liquid; may be colored by customer request

Odor:

Mild odor

Boiling Point (degrees C):

197.8 (388 F)

Melting/Freezing Point (degrees C):

-13.3 (8 F)

Specific Gravity (water=1):

1.13

pH:

10.2

Vapor Pressure:

.1 mmHg at 20 C (68 F)

Viscosity:

18.7 cSt at 20 C (68 F)

VOC Content:

Not Determined

Vapor Density (Air=1):

2.1

Solubility in Water (%):

>10

Other:

None

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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, and combustion products or compounds of phosphorus, potassium.

Hazardous Polymerizations:

DO NOT OCCUR

11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)

Oral:

Animal data does not reflect human toxicity; see Sections 3 & 11

Inhalation:

Not determined.

Dermal:

LD50 Believed to be > 1.00 - 2.00 g/kg (rabbit) slightly toxic

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES)

Skin:

(Draize) Believed to be > .50 - 1.00 /8.0 (rabbit) slightly irritating

Eyes:

(Draize) Believed to be > 15.00 - 25.00 /110 (rabbit) slightly irritating

Sensitization:

Not determined.

Other:

Oral administration of ethylene glycol to pregnant experimental animals has been shown to cause birth defects in the offspring. These effects were not seen when ethylene glycol was administered by dermal application or by inhalation. Continuous ingestion of a diet containing 1% or 2% ethylene glycol for two years produced liver and kidney damage, and bladder stones in rats.

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:

To prevent contamination of drinking water supplies, and poisoning of children, aquatic life, wildlife, and farm and domestic animals, ethylene glycol products such as used antifreeze solution, regardless of quantity, should never be discarded onto the ground, into surface waters, or into storm sewers.

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13. TRANSPORT INFORMATION

Transportation

DOT:

Proper Shipping Name:

Not regulated for drums

Hazard Class:

Not regulated

Identification Number:

Not regulated

Packing Group:

Not regulated

Label Required:

Not regulated

Depending on container size, spills of this product may require reporting under SARA 304 and/or CERCLA 102(A) regulations. Please refer to Sections 2 and 14 of MSDS for composition and component RQ information.

IMDG

Proper Shipping Name:

Not evaluated

ICAO

Proper Shipping Name:

Not evaluated

TDG

Proper Shipping Name:

Not regulated

Hazard Class:

Not regulated

Identification Number:

Not regulated

Label Required:

Not regulated

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 X Chronic X Fire Pressure Reactive N/A

Section 313 Toxic Chemical

Chemical Name	CAS Number	Concentration
1,2-ethanediol (Common Name-Ethylene glycol)	107-21-1	95.00-99.99

CERCLA 102(a)/DOT Hazardous Substances:

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Chemical Name	CAS Number	Range in %	RQ
1,2-ethanediol (Common Name-Ethylene glycol)	107-21-1	95.00-99.99	5000
Sodium hydroxide	1310-73-2	0.001	1000

States Right-to-Know Regulations:

Chemical Name	State Right-to-know
1,2-ethanediol	FL, IL, MA, NJ, PA, RI

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:

Export Notification (TSCA-12b): This product may be subject to export notification under TSCA section 12(b); contains: Proprietary additive

TSCA Inventory Status:

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

WHMIS Classification:

Class D, Div 1, Subdiv B: Toxic Class D, Div 2, Subdiv A: Teratogenic

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:

Not determined

15. ENVIRONMENTAL INFORMATION

Aquatic Toxicity:

Aquatic toxicity rating is believed to be > 100.00 mg/liter practically nontoxic to aquatic organisms.

Mobility:

Not determined.

Persistence and Biodegradability:

This product is considered to be readily biodegradable and is not expected to persist in the environment.

Potential to Bioaccumulate:

This product is not expected to bioaccumulate.

Remarks:

None

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16. OTHER INFORMATION 11/17/2000

Acute or chronic oral consumption of products containing ethylene glycol can produce significant adverse health effects, including death, in humans and animals. Keep out of reach of children and pets.

Due to toxicity considerations with ethylene glycol, the following applications are considered to be prohibited applications: Potable Water Applications; Food, Drug and Cosmetic Formulations; Antifreeze for potable water systems in recreational vehicles and seasonal homes; Antifreeze for fire sprinkler systems.

Huntsman recommends that all exposures to this product be minimized by strictly adhering to recommended occupational controls procedures to avoid any potential adverse health effects.

THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE ACCURATE. IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT FOR PURPOSE OF HAZARD COMMUNICATION AS PART OF HUNTSMAN'S PRODUCT SAFETY PROGRAM. IT IS NOT INTENDED TO CONSTITUTE PERFORMANCE INFORMATION CONCERNING THE PRODUCT. NO EXPRESS WARRANTY, OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE WITH RESPECT TO THE PRODUCT OR THE INFORMATION CONTAINED HEREIN. DATA SHEETS ARE AVAILABLE FOR ALL HUNTSMAN PRODUCTS. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL HUNTSMAN PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE AND YOU ARE ENCOURAGED AND REQUESTED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

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

Supersedes: 3/13/2000

The following section has been revised: 15

Date Issued: 11/17/2000.

Inquiries regarding MSDS should be directed to:
HUNTSMAN
Coordinator, Product Safety
P.O. Box 27707
Houston, TX 77227-7707