


Product Name:	PPE			
Idemitsu Polyvinyl Ether Lubricant (4319-24)				

Revision Date: 02-Nov-2017

Revision Number: 2

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1 Product Identifier

**Product Name:** Idemitsu Polyvinyl Ether Lubricant

#### Other means of identification

**Product Code:** 4319-24

**Synonyms:** Not available

### 1.2 Recommended use of the chemical and restrictions on use

**Recommended Use:** Refrigerant Oil

**Uses advised against:** No information available

### 1.3. Details of the supplier of the safety data sheet

**Supplied by:** Nu-Calgon Wholesaler, Inc.  
2611 Schuetz Road, St. Louis, MO 63043

**Manufactured by:** IDEMITSU KOSAN CO., LTD  
3-1-1 MARUNOUCHI CHIYODA-KU  
TOKYO JAPAN  
PHONE: +81-3-3213-3143

**24 Hour Emergency Phone Number:** Within USA and Canada: 1 800-424-9300  
Outside USA and Canada: + 1 703-741-5970 (collect calls accepted)

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification

This material is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS 2015

Acute toxicity - Oral	Not classified
Acute toxicity - Dermal	Not classified
Acute Toxicity - Inhalation (Gases)	Not classified
Acute Toxicity - Inhalation (Vapors)	Not classified
Acute Toxicity - Inhalation (Dusts/Mists)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/eye irritation	Not classified
Respiratory sensitization	Not classified
Skin sensitization	Category 1A
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration toxicity	Not classified
Physical Hazards	Not classified
Physical Hazards	None

### 2.2. Label elements



**Signal word**

**Warning**

**Hazard statements**

H317 - May cause an allergic skin reaction  
H361 - Suspected of damaging fertility or the unborn child if swallowed

**Precautionary Statements - Prevention:**

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P280 - Wear protective gloves/protective clothing and eye/face protection  
P261 - Avoid breathing dust, fume, gas, mist, vapors or spray  
P272 - Contaminated work clothing should not be allowed out of the workplace

**Precautionary Statements - Response:**

P308 + P313 - IF exposed or concerned: Get medical advice/attention  
P321 - Specific treatment (see supplemental first aid instructions on this label)  
P362 + P364 - Take off all contaminated clothing and wash it before reuse

**Skin**

P302 + 352 - IF ON SKIN: Wash with plenty of soap and water  
P363 - Wash contaminated clothing before reuse  
P333 + P313 - If skin irritation or rash occurs: Get medical

advice/attention

**Precautionary Statements - Storage:**

P405 - Store locked up

**Precautionary Statements - Disposal:**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

### 2.3 Other information

**Other hazards**

- May be harmful in contact with skin
- Toxic to aquatic life
- Harmful to aquatic life with long lasting effects

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable

### 3.2 Mixtures

#### Hazardous Components

Chemical Name	CAS No.	Weight-%	US GHS Classification	Notes
Tricresylphosphate	1330-78-5	1-5	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Reproductive 2 (H361) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	
Oxirane, [[(2-ethylhexyl)oxy]methyl]-	2461-15-6	<1	Skin Sens. 1 (H317)	

## 4. FIRST AID MEASURES

### 4.1 First Aid Measures

**General Advice**

If symptoms persist, call a physician. Take a copy of the Safety Data Sheet when going for medical treatment.

**Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. Call a physician immediately.

**Inhalation**

In case of inadequate ventilation wear respiratory protection. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If unconscious place in recovery position and seek medical advice. Move to fresh air in case of accidental inhalation of vapors. If not breathing, give

	artificial respiration. Call a physician immediately.
<b>Ingestion</b>	Do not induce vomiting without medical advice. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
<b>Protection of First-aiders</b>	Use personal protective equipment. Avoid contact with eyes, skin and clothing.

#### 4.2 Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	No information available.
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#### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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### 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	NFPA: Class IIIB Combustible Liquid
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#### 5.1 Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

#### **Unsuitable Extinguishing Media:**

No information available.

#### 5.2 Specific Hazards Arising from the Chemical

#### **Hazardous combustion products:**

Keep product and empty container away from heat and sources of ignition.

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and / or irritating. Combustion products may include and are not limited to:  
Carbon oxides  
Oxides of Phosphorus  
Sulphur oxides

#### 5.3 Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use personal protection recommended in Section 8. Ensure adequate ventilation. Remove all sources of ignition.
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#### 6.2 Environmental Precautions

<b>Environmental Precautions</b>	See section 12 for additional ecological information. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.
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#### 6.3 Methods and material for containment and cleaning up

<b>Methods for Clean-up</b>	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
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### Spill Management

#### **LARGE SPILLS**

Eliminate sources of ignition. Prevent additional discharge of material if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 15 Regulatory Information) notify the National Response Center.

#### **WATER SPILLS**

Prevent liquid entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Recover by pumping or with suitable absorbent. If liquid is too viscous for pumping, scrape up. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

## 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### **Handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dusts or mists. Avoid contact with eyes, skin and clothing. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protection recommended in Section 8. Wash hands thoroughly after handling. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product.

#### **Safe Handling Advice**

Wear personal protective equipment. Do not breathe vapors or spray mist. Use product only in closed system.

### 7.2. Conditions for safe storage, including any incompatibilities

#### **Storage**

Keep in properly labeled containers. Keep container tightly closed in a dry and well-ventilated place.

#### **Technical measures/Precautions**

Ensure adequate ventilation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

#### **Further information on storage conditions**

Keep container tightly closed

#### **Incompatible Materials and/or Coatings**

No information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### **Exposure Guidelines**

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### 8.2 Exposure controls

#### **Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Consider the potential hazards of

this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

### Personal Protective Equipment

<b>Eye/face protection</b>	Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. If splashes are likely to occur wear tight fitting safety goggles and/or face-shield.
<b>Skin protection</b>	Wear protective gloves/clothing. Long sleeved clothing. Choose the appropriate protective clothing / gloves based on the tasks being performed to avoid exposed skin surfaces. <b>Glove Type:</b> Neoprene, Nitriles
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** When using, do not eat, drink or smoke. Clean equipment, work area and clothing regularly.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Clear / Colorless
<b>Physical State</b>	Liquid
<b>Odor</b>	Characteristic
<b>Odor Threshold</b>	No information available
<b>pH</b>	Not applicable
<b>Melting point / melting range</b>	Not applicable
<b>Boiling point / boiling range</b>	No information available
<b>Flash Point</b>	> 180 °C / 356 °F COC ASTM D92
<b>Evaporation Rate</b>	No information available
<b>Flammability Limit in Air</b>	No information available
<b>Explosion Limits</b>	No information available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density (Air)</b>	No information available
<b>Density</b>	0.94 g/cm <sup>3</sup> @15°C
<b>Solubility</b>	No information available
<b>Partition Coefficient (n-octanol/water)</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Decomposing Temperature</b>	No information available
<b>Viscosity</b>	@ 40C = 66.57 cSt; @ 100C = 8.04 cSt

### Other Information

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

**Reactivity** The product is chemically stable

### 10.2 Chemical stability

**Chemical Stability** Stable under recommended storage conditions.

**10.3 Possibility of Hazardous Reactions**

**Possibility of Hazardous Reactions** None under normal processing.

**Hazardous Polymerization** Hazardous polymerization does not occur.

**10.4 Conditions to Avoid**

**Conditions to Avoid** Heat, flames and sparks.

**10.5 Incompatible Materials**

**Incompatible Materials** Strong oxidizing agents. Strong acids.

**10.6 Hazardous Decomposition Products**

**Hazardous decomposition products** Thermal decomposition can lead to release of irritating gases and vapors.

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on likely routes of exposure**

**Inhalation** May cause irritation of respiratory tract.  
**Eye contact** May cause slight irritation.  
**Skin Contact** May cause an allergic skin reaction.  
**Ingestion** May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation- dust/mist
Tricresylphosphate 1330-78-5	= 3 g/kg ( Rat ) > 20000 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h
Oxirane, [[ (2-ethylhexyl)oxy]methyl]- 2461-15-6	= 7800 mg/kg ( Rat )	2000 mg/kg	

**11.2 Information on toxicological effects**

**Symptoms** No information available

**11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Not classified.  
**Serious eye damage/eye irritation** Not classified.  
**Sensitization** May cause an allergic skin reaction.  
**Mutagenic effects** Not classified.

**11.4 Carcinogenicity**

**Carcinogenicity** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, OSHA or ACGIH.

**Legend:**

*NTP (National Toxicology Program) ACGIH (American Conference of Governmental Industrial Hygienists) IARC (International Agency for Research on Cancer) OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

<b>Reproductive Effects</b>	Suspected of damaging fertility or the unborn child if swallowed.
<b>Developmental Effects</b>	Not classified.
<b>STOT - single exposure</b>	Not classified.
<b>STOT - repeated exposure</b>	Not classified
<b>Chronic Toxicity</b>	Avoid repeated exposure.
<b>Aspiration hazard</b>	Not classified.

**11.5 Acute toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document .**

**Product Information (Estimated):**

<b>ATEmix (oral)</b>	> 2,000 mg/kg
<b>ATEmix (dermal)</b>	> 2,000 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	> 10 mg/l
<b>ATEmix (inhalation-vapor)</b>	> 5,000 mg/l

**12. ECOLOGICAL INFORMATION**

**12.1 Ecotoxicity**

**Ecotoxicity effects**

Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

**12.2 Persistence and degradability** No information available.

**12.3 Bioaccumulation/Accumulation** No information available

**12.4. Mobility in soil** No information available

**PBT and vPvB assessment** No information available

**12.5 Other adverse effects:** No information available

**13. DISPOSAL CONSIDERATIONS**

**Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.**

**Waste Disposal Method** This material, as supplied, is not a hazardous waste according to Federal regulations (40



CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

**Contaminated packaging** Dispose of in accordance with local regulations.

**14. TRANSPORT INFORMATION**

**DOT - Non bulk** Not regulated

**DOT - Bulk** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

<b>TSCA</b>	All ingredients are on the inventory or exempt from listing
<b>DSL</b>	All ingredients are on the inventory or exempt from listing
<b>NDSL</b>	Not Listed
<b>ELINCS</b>	Not Listed
<b>ENCS</b>	All ingredients are on the inventory or exempt from listing
<b>CHINA</b>	All ingredients are on the inventory or exempt from listing
<b>KECL</b>	All ingredients are on the inventory or exempt from listing
<b>PICCS</b>	Does not comply
<b>AICS</b>	All ingredients are on the inventory or exempt from listing
<b>NZIoC</b>	Does not comply
<b>REACH</b>	All ingredients are on the inventory or exempt from listing

**USA**

**Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazardous Categorization**

<b>Acute Health Hazard</b>	Skin Sensitizer Reproductive Toxicity
<b>Chronic Health Hazard</b>	Skin Sensitizer Reproductive Toxicity
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**CERCLA/SARA 302 & 304**

Section 302 & 304 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 355.

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any HAPs.

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**State Right-to-Know**

Chemical Name	CAS No.	Weight-%	New Jersey
Tricresylphosphate	1330-78-5	1-5	X

**New Jersey Worker and Community Right-to-Know Act:**

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Lubricating Oil)

**Canada**

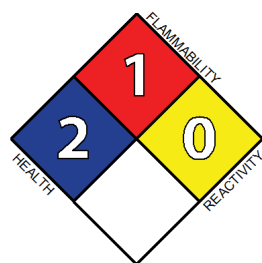
This material has been classified in accordance with the WHMIS 2015 regulation

Chemical Name	CAS No.	Weight-%	NPRI
2,6-di-tert-butyl p-cresol	128-37-0	<1	Listed

**Legend**

NPRI - National Pollutant Release Inventory

**16. OTHER INFORMATION**



**NFPA**

Health: 2

Flammability: 1

Instability: 0

Prepared By

Lakyn Neumeyer

Revision Date:

02-Nov-2017

Revision Summary:

Acute Toxicity Data Change

**Disclaimer:**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**