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## II. HEALTH HAZARD INFORMATION

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### **EMERGENCY AND FIRST AID PROCEDURES**

#### **EYES:**

OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION. IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes forcibly holding lids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

#### **SKIN:**

SEEK MEDICAL ATTENTION IMMEDIATELY. Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. CONTINUE TO FLUSH UNTIL MEDICAL ATTENTION ARRIVES. Discard non-rubber shoes. Wash clothing before reuse.

#### **INHALATION:**

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, administer artificial resuscitation. GET MEDICAL ATTENTION IMMEDIATELY.

#### **INGESTION:**

DO NOT INDUCE VOMITING. This material is not soluble. DO NOT GIVE FLUIDS. If spontaneous vomiting is inevitable, PREVENT ASPIRATION by keeping the victims head below the knees. GET IMMEDIATE MEDICAL ATTENTION. A qualified physician can perform gastric lavage only when the airway (trachea) has been secured to prevent aspiration.

### **ROUTES OF EXPOSURE**

#### **INHALATION:**

Inhalation of vapors, mist or liquid may cause irritation to the mucous membranes of the nose and throat and can produce serious chemical burns.

#### **SKIN:**

Exposure to vapor, mist or liquid may irritate skin and can produce serious burns.

#### **EYE CONTACT:**

May irritate eyes and can produce chemical burns.

#### **INGESTION:**

Can cause irritation and burning of the mouth, throat and gastrointestinal tract.

### **EFFECTS OF OVEREXPOSURE**

#### **ACUTE:**

Irritating and corrosive to the eyes, skin, respiratory and digestive tracts.

#### **CHRONIC:**

No known chronic effects.

#### **TOXICOLOGY DATA:**

Acute Oral LD50 (rat) 3.2 g/kg.

#### **SYNERGISTIC MATERIALS:**

Not Applicable.

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### III. IMPORTANT COMPONENTS

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#### CAS NUMBER / NAME

812-00-0 Phosphoric acid, monomethyl ester

#### EXPOSURE LIMITS

PEL: Not established

TLV: Not established

#### COMMON NAMES:

MONOMETHYL PHOSPHATE

#### Listed On (List Legend Below):

00 19 22 23 51 75 76 77

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#### PERCENTAGE

VOL

WT

40-60

813-78-5 Phosphoric acid, dimethyl ester

#### EXPOSURE LIMITS

PEL: Not Established

TLV: Not Established

#### COMMON NAMES:

DIMETHYL PHOSPHATE

#### Listed On (List Legend Below):

00 19 23 36 51 75 76 77

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#### PERCENTAGE

VOL

WT

40-60

7664-38-2 Phosphoric acid

#### EXPOSURE LIMITS

PEL: 1 mg/m<sup>3</sup>, TWA

STEL 3 mg/m<sup>3</sup>

TLV: 1 mg/m<sup>3</sup>, TWA

STEL 3 mg/m<sup>3</sup>

#### COMMON NAMES:

ORTHOPHOSPHORIC ACID

#### Listed On (List Legend Below):

00 03 12 13 21 22 24 50 51 56 57 58 60 62 64 70 71 72 75 76 77

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#### PERCENTAGE

VOL

WT

0.01-8

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### III. IMPORTANT COMPONENTS (Continued)

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#### CAS NUMBER / NAME

67-56-1 Methanol

#### EXPOSURE LIMITS

PEL: 200 ppm; 260 mg/m<sup>3</sup>, TWA, Skin  
STEL 250 ppm; 325 mg/m<sup>3</sup>

TLV: 200 ppm; 262 mg/m<sup>3</sup>, TWA, Skin  
STEL 250 ppm; 328 mg/m<sup>3</sup>

#### PERCENTAGE

VOL ND  
WT 0.01-1

#### COMMON NAMES:

METHYL ALCOHOL

#### Listed On (List Legend Below):

00 02 13 18 21 22 50 51 56 57 75 76 77

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All components of this product that are required to be on the TSCA Inventory are listed on the inventory.

Not listed as carcinogen - IARC, NTP, OSHA

#### LIST LEGEND

00 TSCA INVENTORY	56 OSHA PERMISSIBLE EXPOSURE LIM
02 SARA Section 313 Toxic Chemical	
03 HAS A CERCLA REPORTABLE QTY	57 ACGIH THRESHOLD LIMIT VALUES
12 PA HAZARDOUS SUBSTANCE	58 MASSACHUSETTS RIGHT TO KNOW
13 PA ENVIRONMENTAL HAZ SUBSTANCE	60 CLEAN WATER ACT, SEC 311
19 PA REQUIREMENT 23%	62 WHMIS
21 NJ SPECIAL HEALTH HAZ SUB	64 NIOSH RECOMMENDED EXPOS LIMITS
22 CANADIAN DOMESTIC SUB LIST	70 EUR AGRMT - CARRIAG DANG GOODS
23 NJ REQUIREMENT ≥1%	71 REGS - CARRIAGE OF GOODS/RAIL
24 NJ DISCHARGE OF HAZ SUBSTANCES	72 ANNEX I
36 CANADIAN NDSL	75 AUSTRALIAN INVENTORY (AICS)
50 PHILIPPINES INVENTORY (PICCS)	76 JAPANESE CHEMICAL INVENTORY
51 EINECS	77 KOREAN EXIST. CHEMICALS (ECL)

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### IV. FIRE AND EXPLOSION DATA

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FLASH POINT: (COC) 171° C (340°F)

AUTOIGNITION TEMPERATURE: Not Applicable

FLAMMABLE LIMITS IN AIR, % BY VOLUME - UPPER: Not Applicable

LOWER: Not Applicable

#### EXTINGUISHING MEDIA:

Use dry chemical, foam, carbon dioxide or water spray.

#### SPECIAL FIRE FIGHTING PROCEDURES:

In fire conditions wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

#### UNUSUAL FIRE AND EXPLOSION HAZARD:

Under fire conditions, will liberate toxic and corrosive oxides of phosphorus.

#### SENSITIVITY TO MECHANICAL IMPACT:

Not Available.

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**SENSITIVITY TO STATIC DISCHARGE:** Not Available.

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**V. SPECIAL PROTECTION**

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**VENTILATION REQUIREMENTS:**

Provide good general room ventilation plus local exhaust at points of emission.

**SPECIFIC PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATORY:**

NIOSH/MSHA approved respirator, following manufacturer's recommendations, should be used as a precautionary measure where airborne contaminants may occur.

**EYE:**

Wear chemical safety goggles plus full face shield to protect against splashing when appropriate.

**GLOVES:**

Wear chemical resistant gloves such as neoprene, rubber or vinyl.

**OTHER CLOTHING AND EQUIPMENT:**

Eyewash facility and emergency shower should be in close proximity. Impervious clothing and rubber boots should be worn for splash protection.

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**VI. PHYSICAL DATA**

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<b>BOILING POINT @ 760 mm Hg:</b>	NA; decomposition starts at 124°C (225°F)
<b>FREEZING POINT:</b>	-76°F
<b>VAPOR PRESSURE:</b>	No Data
<b>SPECIFIC GRAVITY (H<sub>2</sub>O=1):</b>	1.4
<b>SOLUBILITY IN H<sub>2</sub>O % BY WT:</b>	Insoluble
<b>VAPOR DENSITY (Air=1):</b>	No Data
<b>APPEARANCE AND ODOR:</b>	Clear, colorless liquid
<b>ODOR THRESHOLD (ppm):</b>	No Data
<b>pH:</b>	2 @ 10 GM/L
<b>DENSITY:</b>	11.7 lb/gal
<b>EVAPORATION RATE:</b>	No Data
<b>COEFFICIENT WATER/OIL DISTRIBUTION:</b>	No Data

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**VII. REACTIVITY DATA**

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**CONDITIONS CONTRIBUTING TO INSTABILITY:**

Avoid exposure to heat or to most metals or plastics, especially at elevated temperatures. Thermal degradation occurs above 255°F.

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## VII. REACTIVITY DATA (Continued)

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### **INCOMPATIBILITY:**

Reacts with alkalis producing heat. Reacts with many metals liberating flammable hydrogen gas.

### **HAZARDOUS DECOMPOSITION PRODUCTS:**

Thermal degradation occurs above 255°F, producing oxides of phosphorus.

### **CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:**

Material is not known to polymerize.

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## VIII. HANDLING AND STORAGE

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### **HANDLING AND STORAGE PRECAUTIONS:**

Store away from heat and separate from alkalis, aluminum, zinc and other metals. Protect from atmospheric moisture. Storage areas for drummed material should have adequate drainage. Storage tanks should be vented and diked. This material is acidic and will attack carbon steel.

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## IX. ENVIRONMENTAL PROCEDURES

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### **STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Isolate spill and restrict non-essential personnel. Cleanup personnel should use protective measures outlined in section V of this MSDS. Soak up with vermiculite, sand or other absorbent material and place in marked metal container for disposal. Neutralize with soda ash. Flush spill area with large quantities of water after spilled material has been removed. Do not allow contaminated water to enter water ways or sewers..

### **WASTE DISPOSAL METHOD:**

The RCRA characteristic of corrosivity, D002, is exhibited by the unused product if it becomes a waste. Product should be completely removed from container. Material that cannot be used or chemically reprocessed should be disposed of in accordance with all local, state and federal regulations. Incinerate in equipment designed to handle oxides of phosphorus as combustion products or send to a waste disposal firm. Empty containers should be disposed of in a manner meeting government regulations.

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## X. ADDITIONAL INFORMATION

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

To aid our customers in complying with regulatory requirements, SARA Title III hazard categories for this product are indicated in Section I. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40 CFR Part 370. Please consult those regulations for details.

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This product contains a toxic chemical or chemicals subject to the reporting requirements of SECTION 313 of TITLE III of the SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 and 40 CFR PART 372. (See Section III, List Legend 02).

**INTERNATIONAL REGULATIONS:** Consult the regulations of the importing country. European Union Risk and Safety Phrase Codes: R34 S26-28.1 S45

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## **XI. PREPARATION INFORMATION**

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For additional Non-Emergency health, safety or environmental information telephone (716) 773-8438, or write to:

IsleChem, LLC  
2801 Long Road  
Grand Island, NY 14072

**For Emergencies: 24 HOUR EMERGENCY PHONE: 1-800-424-9300**

**To request an MSDS: 716-773-8438**

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## **WARNING LABEL INFORMATION**

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**SIGNAL WORD: DANGER**

**STATEMENT OF HAZARDS:**

LIQUID CORROSIVE  
CAUSES IRRITATION OR BURNS TO THE SKIN, EYES, RESPIRATORY AND DIGESTIVE TRACTS.

**PRECAUTIONARY STATEMENTS:**

Keep container closed.  
Insure adequate ventilation or use an approved respirator.  
Avoid breathing vapor.  
Do not get in eyes, on skin, on clothing.  
Wash thoroughly after handling.  
Use goggles, impervious clothing and rubber shoes.  
Reacts with aluminum, zinc, and other metals liberating flammable hydrogen gas.

**FIRST AID:**

**FOR EYES:**

OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION.  
IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes forcibly holding lids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

**FOR SKIN:**

SEEK MEDICAL ATTENTION IMMEDIATELY. Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. CONTINUE TO FLUSH UNTIL MEDICAL ATTENTION ARRIVES. Discard non-rubber shoes. Wash clothing before reuse.

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**WARNING LABEL INFORMATION (Continued)**

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**IF INHALED:**

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. GET MEDICAL ATTENTION IMMEDIATELY

**IF SWALLOWED:**

DO NOT INDUCE VOMITING. This material is not soluble. DO NOT GIVE FLUIDS. If spontaneous vomiting is inevitable, PREVENT ASPIRATION by keeping the victims head below the knees. GET IMMEDIATE MEDICAL ATTENTION. A qualified physician can perform gastric lavage only when the airway (trachea) has been secured to prevent aspiration.

**IN CASE OF:****SPILL OR LEAK:**

Soak up with vermiculite, sand, earth or other absorbent material and place in marked metal container for disposal. Neutralize with soda ash. Flush spill area with large quantities of water.

**FIRE:**

Use dry chemical, Halon, foam, carbon dioxide or water spray. Use air supplied respirator and full protection equipment. Fire will liberate toxic gases.

**HANDLING AND STORAGE:**

Store in a cool, dry place separate from alkalis, aluminum, zinc and other metals.

**DISPOSAL:**

The RCRA characteristic of corrosivity, D002, is exhibited by the unused product if it becomes a waste. Product should be completely removed from container. Material that cannot be used or chemically reprocessed should be disposed of in accordance with all local, state and federal regulations. Incinerate in equipment designed to handle oxides of phosphorus as combustion products or send to a waste disposal firm. Empty containers should also be disposed of in a manner meeting government regulations.

**INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:**

This product contains:

CAS#	NAME
812-00-0	Phosphoric acid, monomethyl ester
813-78-5	Phosphoric acid, dimethyl ester
7664-38-2	Phosphoric acid
67-56-1	Methanol

**HMIS RATING SYSTEM: HEALTH 3 FLAMMABILITY 1 REACTIVITY 0**

**FOR INDUSTRIAL USE ONLY**

For additional information, see Material Safety Data Sheet (MSDS) for this product.