
II. HEALTH HAZARD INFORMATION

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, give mouth-to-mouth 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 may cause irritation to the mucous membranes of the nose and throat and can produce serious chemical burns.

SKIN:

Exposure 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.

III. IMPORTANT COMPONENTS

CAS NUMBER / NAME

107-66-4 Phosphoric acid, dibutyl ester

EXPOSURE LIMITS

PEL: 1 ppm; 5 mg/m3, TWA
STEL 2 ppm; 10 mg/m3

TLV: 1 ppm; 8.6 mg/m3, TWA
STEL 2 ppm; 17 mg/m3

PERCENTAGE

VOL 40-60
WT 40-60

COMMON NAMES:

DIBUTYL ACID PHOSPHATE

Listed On (List Legend Below):

00 12 16 22 27 47 50 51 56 57 58 62 64 75 76 77

1623-15-0 Phosphoric acid, monobutyl ester

EXPOSURE LIMITS

PEL: Not Established
TLV: Not Established

PERCENTAGE

VOL 40-60
WT 40-60

COMMON NAMES:

Listed On (List Legend Below):

00 22 27 40 47 50 51 62 75 76 77

7664-38-2 Phosphoric acid

EXPOSURE LIMITS

PEL: 1 mg/m3, TWA
STEL 3 mg/m3

TLV: 1 mg/m3, TWA
STEL 3 mg/m3

PERCENTAGE

VOL 1-8
WT 1-8

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

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
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
16	NJ WORKPLACE HAZ SUBSTANCE LST	62	WHMIS
21	NJ SPECIAL HEALTH HAZ SUB	64	NIOSH RECOMMENDED EXPOS LIMITS
22	CANADIAN DOMESTIC SUB LIST	70	EUR AGRMT - CARRIAG DANG GOODS
24	NJ DISCHARGE OF HAZ SUBSTANCES	71	REGS - CARRIAGE OF GOODS/RAIL
27	TSCA SECTION 8(A) PAIR	72	ANNEX I
40	NOT PEL/TLV	75	AUSTRALIAN INVENTORY (AICS)
47	TSCA IUR LIST	76	JAPANESE CHEMICAL INVENTORY
50	PHILIPPINES INVENTORY (PICCS)	77	KOREAN EXIST. CHEMICALS (ECL)
51	EINECS		

IV. FIRE AND EXPLOSION DATA

FLASH POINT: (COC) 110° C (230°F) AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS IN AIR, % BY VOLUME - UPPER: Not Applicable
LOWER: Not Applicable

EXTINGUISHING MEDIA:

Use dry chemical, Halon, 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.

SENSITIVITY TO STATIC DISCHARGE:

Not Available.

V. SPECIAL PROTECTION

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.

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.

VI. PHYSICAL DATA

BOILING POINT @ 760 mm Hg:	Not applicable; decomposition starts at 124°C (225°F)
FREEZING POINT:	< -60°C
VAPOR PRESSURE:	No Data
SPECIFIC GRAVITY (H₂O=1):	1.12
SOLUBILITY IN H₂O % BY WT:	Insoluble
VAPOR DENSITY (Air=1):	No Data
APPEARANCE AND ODOR:	Clear, colorless liquid
ODOR THRESHOLD (ppm):	No Data
pH:	2 @ 10 GM/L
DENSITY:	9.3 lb/gal
EVAPORATION RATE:	No Data
COEFFICIENT WATER/OIL DISTRIBUTION:	No Data

VII. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY:

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

INCOMPATIBILITY:

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

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal degradation produces oxides of Carbon and Phosphorus.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

Material is not known to polymerize.

VIII. HANDLING AND STORAGE

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

IX. ENVIRONMENTAL PROCEDURES

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.

X. ADDITIONAL INFORMATION

Designated a hazardous chemical by OSHA (29 CFR Sec 1910, Subpart Z). Designated a hazardous material by ACGIH.

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.

XI. PREPARATION INFORMATION

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

WARNING LABEL INFORMATION

SIGNAL WORD: DANGER

STATEMENT OF HAZARDS:

ACID CORROSIVE

MAY CAUSE 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.

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.

WARNING LABEL INFORMATION (Continued)

HANDLING AND STORAGE:

Store in a cool, dry place separate from alkalies, 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
107664	Phosphoric acid, dibutyl ester
1623150	Phosphoric acid, monobutyl ester
7664382	Phosphoric acid

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.