



Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810

Number:
Issue Date

DLM-2703
03/13/12

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MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Description PHOSPHINE (D3, 98%)

Cambridge Isotope Laboratories, Inc.
50 Frontage Rd
ANDOVER, MA 01810
USA

E-mail cilsales@isotope.com
Web Site www.isotope.com

Phone Numbers

Emergency Contact Chemtrec
Emergency Phone 1-800-424-9300 (24 hours)

Customer Service 1-800-322-1174 (8:30-5:30 EST)
Phone
Transportation 1-202-483-7616 (24 hours)

2 HAZARDS IDENTIFICATION

OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Corrosive

Target Organs

Lungs, Cardiovascular system, Nerves, Liver, Kidney

GHS Label Information

Signal Word Danger

Hazards Identification

Skull & crossbones
Corrosion
Flame

Hazard Statement(s)

Catches fire spontaneously if exposed to air.
Toxic if inhaled.
Toxic in contact with skin.

Precautionary Statement(s)

Store in a well-ventilated place.



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Keep away from heat/sparks/open flames/hot surfaces- No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
If medical advice is needed, have product container or label at hand.

HMIS Ratings

Chronic Health	*
Physical	0
Flammability	0
Health	4

NFPA Codes

Fire	0
Health	4
Reactivity	0

Potential Health Effects

Eyes	Causes eye burns.
Ingestion	May be harmful if swallowed. Causes burns.
Inhalation	May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be fatal if absorbed through skin. Causes skin burns.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Composition / Information on Ingredients

Chemical Formula	PD3
Molecular Weight	37.02
CAS No.	13537-03-6
EC No.	232-260-8
Index No.	015-181-00-1

4 FIRST AID MEASURES

First Aid Measures

Eyes	Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation	If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.



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Skin Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Additional Information Move out of dangerous area. Consult a physician and show this safety data sheet.

5 FIRE FIGHTING MEASURE

Fire Fighting Measures

Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Fire Fighting Equipment Wear self contained breathing apparatus for fire fighting if necessary.

Fire Fighting Procedures Use water spray to cool unopened containers.

6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures

Personal Precautions Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleanup Wipe up with absorbent material (e.g. cloth, fleece).

7 HANDLING AND STORAGE

Precautions for Safe Handling

Handling Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for Safe Storage

Storage Store at room temperature away from light and moisture.



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8 EXPOSURE CONTROL / PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

CHEMICAL NAME
PHOSPHINE

TWA
STEL

OSHA PEL ACGIH TLV
 0.3 ppm
 1 ppm

Personal Protection

Eyes - Face Wear safety glasses with side shields (or goggles) and a face shield.

Skin Wash with soap and plenty of water. Consult a physician.

Respiratory When appropriate, use NIOSH/CEN approved respirator.

Protective Clothing Wear suitable protective clothing and gloves.

Work Hygienic Practices Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties (Unlabeled Compound)

Form	Gaseous
pH	No data available
Melting Point	No data available
Boiling Point	- 87.5 °C (- 125.5 °F) - lit
Flashpoint	No data available
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Vapor Density	1.17 - (Air = 1.0)
Solubility in Water	No data available
Auto Ignition Temperature	No data available

10 STABILITY AND REACTIVITY

Stability and Reactivity

Chemical Stability Stable if stored under recommended conditions.



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Conditions to Avoid Pyrophoric
Heat, flames, and sparks.

Hazardous decomposition products Formed under fire conditions: Oxides of phosphorus

Materials to avoid Oxidizing agents, Halogens, Nitric acid

11 TOXICOLOGICAL INFORMATION

Acute Toxicity

Serious Damage/Eye Irritation No data available

Skin Corrosion/Irritation No data available

Inhalation No data available

Respiratory or Skin Sensitization Not available

IARC No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible, or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.

NTP No component of this product present at levels greater than or equal to 0.1% is identifiable as a known or anticipated carcinogen by NTP.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure

Pulmonary edema
Burning sensation
Cough
Wheezing
Shortness of breath
Laryngitis
Headache
Nausea
Vomiting

The chemical, physical, and toxicological properties have not been thoroughly investigated.

Other Information

RTECS SY7525000



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12 ECOLOGICAL INFORMATION

Toxicity

Persistence and Degradability	Not available
Bioaccumulative Potential	Not available
Mobility in Soil	Not available
PBT and vPvB Assessment	Not available
Other Adverse Effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms.

13 DISPOSAL CONSIDERATIONS

Disposal Considerations

Product Disposal	Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.
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14 TRANSPORT INFORMATION

Transportation Information-DOT/IATA/IMDG

Special Shipping Notes	IATA Passenger/Cargo: Not permitted for transport.
UN Number	2199
Prop. Ship. Name	Phosphine
Hazard Class	2.3 (2.1)
Reportable Quantity (RQ) DOT US	100 lbs
Marine Pollutant	No
Poison Inhalation Hazard	Hazard zone A

15 REGULATORY INFORMATION

Regulatory Information



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Target Organ Effect, Highly toxic by inhalation, Corrosive

SARA

Sara 302 Component	Yes
Sara 313 Component	Yes

SARA 311/312 Hazards

Acute (Y/N)	Y
Chronic (Y/N)	Y

STATE REGULATIONS

Massachusetts Right to Know	Yes
Pennsylvania Right to Know	Yes
New Jersey Right to Know	Yes

California Proposition 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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Canada

DSL Status	All components are on the Canadian DSL list.
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EU

Hazard	Flammable. Very Toxic.
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Safety Statements

Keep container in a well-ventilated place.
Keep away from sources of ignition - No smoking.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Risk Statements

Spontaneously flammable in air.
In use, may form flammable/explosive vapour-air mixture.
Very toxic by inhalation and in contact with skin.

16 OTHER INFORMATION



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Additional MSDS
Information

This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Approved On
Version Number

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