

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixture  
 Product name : Phosbrite Coproduct  
 Product code : PotashCorp MSDS 98  
 Synonyms : COPRODPB

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial Use  
 Agricultural chemical

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

PCS Sales (USA), Inc.  
 1101 Skokie Blvd.  
 Suite 400  
 Northbrook, IL 60062  
 T 800-241-6908 / 847-849-4200

Suite 500  
 122 1st Avenue South  
 Saskatoon, Saskatchewan Canada S7K7G3  
 T 800-667-0403 (Canada) / 800-667-3930 (USA)

[SDS@PotashCorp.com](mailto:SDS@PotashCorp.com) - [www.PotashCorp.com](http://www.PotashCorp.com)

### 1.4. Emergency telephone number

Emergency number : 800-424-9300  
 CHEMTREC

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Ox. Liq. 3	H272
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1A	H314
Eye Dam. 1	H318
Carc. 1A	H350
STOT SE 3	H335
Aquatic Acute 2	H401

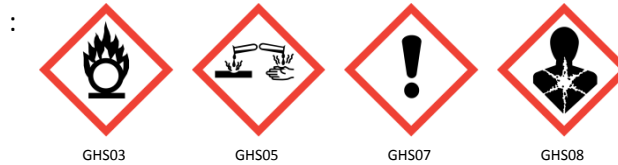
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## 2.2. Label elements

### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H272 - May intensify fire; oxidizer  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation  
H350 - May cause cancer  
H401 - Toxic to aquatic life

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from open flames. - No smoking  
P220 - Keep/Store away from combustible materials  
P221 - Take any precaution to avoid mixing with incompatible or combustible materials  
P260 - Do not breathe fume, mist, vapours, spray  
P264 - Wash hands and forearms thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear eye protection, face protection, protective gloves, protective clothing  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P310 - Immediately call a POISON CENTER or doctor  
P312 - Call a POISON CENTER or doctor if you feel unwell  
P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use appropriate media for extinction  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container according to local, regional, national, and international regulations

## 2.3. Other hazards

Hazardous to the aquatic environment.

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No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Phosphoric acid	(CAS No.) 7664-38-2	25 – 40, 40 - 50	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 2, H401
Sulfuric acid	(CAS No.) 7664-93-9	4 – 7, 7 - 12	Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350
Nitric acid	(CAS No.) 7697-37-2	1 - 4	Ox. Liq. 3, H272 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.
- First-aid measures after ingestion : If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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

- Symptoms/injuries : Corrosive. Causes burns. Harmful If inhaled.

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Symptoms/injuries after inhalation	: Causes severe respiratory irritation if inhaled. Symptoms may include: Burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.
Symptoms/injuries after skin contact	: Contact may cause immediate severe irritation progressing quickly to chemical burns.
Symptoms/injuries after eye contact	: Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage and effects such as erosion of teeth, lesions on the skin, tracheo-bronchitis, mouth inflammation, conjunctivitis, and gastritis. Repeated or prolonged inhalation of mist may cause cancer.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable. Under conditions of fire this material may produce: Oxides of phosphorus; Phosphine; Sulphur oxides; Nitrogen oxides.
Explosion hazard	: Product is not explosive.

### 5.3. Advice for firefighters

Firefighting instructions	: Keep upwind. Use water spray or fog for cooling exposed containers. If water is added to concentrated acid, violent splattering can occur, and considerable heat may be generated. Cool non-leaking, fire-exposed containers with water spray.
Protection during firefighting	: Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products.
Other information	: Do not allow run-off from fire fighting to enter drains or water courses.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

- Protective equipment : Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

#### 6.1.2. For emergency responders

- Protective equipment : Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.
- Emergency procedures : Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

### 6.2. Environmental precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300. In other countries call CHEMTREC at (International code) +1-703-527-3887.

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or inert absorbents to prevent migration and entry into sewers or streams. Do not allow into drains or water course or dispose of where ground or surface waters may be affected.
- Methods for cleaning up : Ventilate area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labelled container to be disposed at an appropriate disposal facility according to current applicable laws and regulations and product characteristics at the time of disposal.
- Liquid spill : neutralize with powdered limestone or sodium bicarbonate.
- Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Wear recommended personal protective equipment. Ensure there is adequate ventilation. Keep away from heat and sources of ignition. Employ good maintenance practices to prevent leaks. Use good process control measures to prevent releases. Do not add water to acid. When diluting, always add acid to water. Causes severe burns.

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Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.

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

Storage conditions : Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials. Diking of storage tanks is recommended.

Incompatible materials : Bases; Aluminum; Copper; Mild steel; Brass; Bronze; Reducing agents

Prohibitions on mixed storage : Keep away from (strong) bases.

Storage area : Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials.

## 7.3. Specific end use(s)

Industrial use. Agricultural chemical

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Sulfuric acid (7664-93-9)		
USA ACGIH	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
USA NIOSH	IDLH	15 mg/m <sup>3</sup>
USA NIOSH	TWA	1 mg/m <sup>3</sup> / 3mg/m <sup>3</sup> (STEL)
USA OSHA	TWA	1 mg/m <sup>3</sup>
Alberta	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
British Columbia	TWA	0.2 mg/m <sup>3</sup> (thoracic, contained in strong inorganic acid mists)
Manitoba	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
New Brunswick	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Newfoundland & Labrador	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
Northwest Territories	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Nova Scotia	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
Nunavut	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Ontario	TWA	0.2 mg/m <sup>3</sup> (thoracic)
Prince Edward Island	TWA	0.2 mg/m <sup>3</sup> (thoracic fraction)
Quebec	TWAEV / STEV	1 mg/m <sup>3</sup> (TWAEV), 3 mg/m <sup>3</sup> (STEV)
Saskatchewan	TWA / STEL	0.2 mg/m <sup>3</sup> (TWA, thoracic fraction), 0.6 mg/m <sup>3</sup> (STEL, thoracic fraction)
Yukon	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 1 mg/m <sup>3</sup> (STEL)

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<b>Phosphoric acid (7664-38-2)</b>		
USA ACGIH	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
USA NIOSH	IDLH	1000 mg/m <sup>3</sup>
USA NIOSH	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
USA OSHA	TWA	1 mg/m <sup>3</sup>
Alberta	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
British Columbia	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Manitoba	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
New Brunswick	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Newfoundland & Labrador	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Northwest Territories	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Nova Scotia	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Nunavut	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Ontario	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Prince Edward Island	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Quebec	TWAEV / STEV	1 mg/m <sup>3</sup> (TWAEV), 3 mg/m <sup>3</sup> (STEV)
Saskatchewan	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Yukon	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 1 mg/m <sup>3</sup> (STEL)

<b>Nitric acid (7697-37-2)</b>		
USA ACGIH	TWA / STEL	2 ppm (TWA), 4 ppm (STEL)
USA NIOSH	IDLH	25 ppm
USA NIOSH	TWA / STEL	2 ppm (TWA), 4 ppm (STEL)
USA OSHA	TWA	2 ppm
Alberta	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
British Columbia	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Manitoba	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
New Brunswick	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Newfoundland & Labrador	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Northwest Territories	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Nova Scotia	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Nunavut	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Ontario	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Prince Edward Island	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Quebec	TWAEV / STEV	1 mg/m <sup>3</sup> (TWAEV), 3 mg/m <sup>3</sup> (STEV)

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Nitric acid (7697-37-2)		
Saskatchewan	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 3 mg/m <sup>3</sup> (STEL)
Yukon	TWA / STEL	1 mg/m <sup>3</sup> (TWA), 1 mg/m <sup>3</sup> (STEL)

## 8.2. Exposure controls

- Appropriate engineering controls : Provide sufficient ventilation to keep vapors below the permissible exposure limit. Ensure adequate ventilation, especially in confined areas. Packaging and unloading areas and open processing equipment may require mechanical exhaust systems. Corrosion-proof construction recommended.
- Personal protective equipment : Protective goggles. Face shield. Gas mask at concentration in the air >> TLV. Protective clothing.



- Hand protection : Impermeable protective gloves, such as: nitrile, neoprene, or PVC. Wear gauntlet gloves. Check glove manufacturer's permeation / degradation information.
- Eye protection : Chemical safety goggles and full face shield. Do not wear contact lenses. For increased protection, use supplied-air acid hood.
- Skin and body protection : Wear suitable protective clothing. Wear acid-resistant suit with acid-resistant apron, boots.
- Respiratory protection : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits. Use respirator approved for acid fumes and mist.
- Environmental exposure controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

## SECTION 9: Physical and chemical properties

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

- Physical state : Liquid
- Appearance : Clear
- Colour : Various
- Odour : Odorless
- Odour threshold : No data available
- pH : 1.6 – 2.1
- pH solution : 1 %
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point range : 104 - 129 °C (219 - 264 °F)
- Flash point : No data available



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Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 7 – 17 mm Hg at 21 °C (70 °F)
Relative vapour density at 20 °C	: No data available
Relative density	: 1.2 – 1.5 at 27 °C (80 °F)
Bulk Density	: 10 - 13 lb/gal
Solubility	: Water: Miscible
Log Pow	: No data available
Log Kow	: No data available
Viscosity	: 21 – 43 cP at 27 °C (80 °F)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

## 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Material is hygroscopic. Acidic liquids, such as this material, may react with metals and release hydrogen gas.

### 10.2. Chemical stability

Stable at standard temperature and pressure.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Protect from moisture. Avoid high temperatures.

### 10.5. Incompatible materials

Bases; Aluminum; Copper; Mild steel; Brass; Bronze; Reducing agents

### 10.6. Hazardous decomposition products

Under conditions of fire this material may produce: Oxides of phosphorus; Phosphine; Sulphur oxides; Nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

<b>Sulfuric acid (7664-93-9)</b>	
LD50 oral rat	2140 mg/kg
LC50 inhalation rat (mg/l)	0.36 mg/l 4 h (reported as 510 mg/m <sup>3</sup> /2 h)
LC50 inhalation rat (ppm)	86.75 ppm 4 h (reported as 347 ppm/1 h)

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<b>Phosphoric acid (7664-38-2)</b>	
LD50 oral rat	1530 mg/kg
LD50 dermal rabbit	2730 mg/kg
LC50 inhalation rat (mg/l)	> 850 mg/m <sup>3</sup> (Exposure time: 1 h)

<b>Nitric acid (7697-37-2)</b>	
LC50 inhalation rat (mg/l)	0.13 mg/l (Exposure time: 4 h)
ATE (dust,mist)	0.13 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
pH: 1.6 – 2.1 (1% solution)

Serious eye damage/irritation : Causes serious eye damage.  
pH: 1.6 – 2.1 (1% solution)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer<sup>1</sup>.

<b>Sulfuric acid (7664-93-9)</b>	
IARC group	1

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

<b>Ecotoxicity</b>	<b>EPA Ecological Toxicity rating :</b>	High
	<b>Acute Toxicity to Fish:</b>	( <i>L. macrochirus</i> (bluegill sunfish)) 96-hr static: LC <sub>50</sub> = pH 3.0–3.5.
	<b>Chronic Toxicity to Fish:</b>	Mosquito fish: LD <sub>50</sub> = 138 mg/L; 96 hours (CAS No. 7664 38 2)
	<b>Acute Toxicity to Aquatic Invertebrates:</b>	( <i>Daphnia magna</i> ) 12-hr static: EC <sub>50</sub> = pH 4.6; ( <i>Daphnia pulex</i> ) 12-hr static: EC <sub>50</sub> = pH 4.1; ( <i>Gammarus pulex</i> ) 12-hr static: LC <sub>50</sub> = pH 3.4
	<b>Chronic Toxicity to Aquatic Invertebrates:</b>	No data available
	<b>Acute Toxicity to Aquatic Plants:</b>	Dangerous to aquatic plants at high concentrations.
	<b>Toxicity to Bacteria:</b>	(Activated sludge): EC <sub>50</sub> = pH 2.55.
	<b>Toxicity to Soil Dwelling Organisms:</b>	No data available
<b>Environmental Fate:</b>	<b>Toxicity to Terrestrial Plants:</b>	(Peas, beans, beets, rapeseed and weeds) Sprayed with 15-20% solution of H <sub>3</sub> PO <sub>4</sub> : Foliage was destroyed on all plants.
	<b>Stability in Water:</b>	Ionic dissociation in water.
	<b>Stability in Soil:</b>	Dissolves some soil material (carbonates).
	<b>Transport and Distribution:</b>	Under acidic soil conditions, sparsely soluble phosphates tend to solubilize and may migrate to water.

<sup>1</sup> "The International Agency for Research on Cancer (IARC) classified "strong inorganic acid mists containing sulfuric acid" as a Category 1 carcinogen, a substance that is "carcinogenic to humans". The National Toxicity Program classified "strong inorganic acid mists containing sulfuric acid" as a "known human carcinogen". These classifications are for strong inorganic acid mists only and do not apply to sulfuric acid or sulfuric acid solutions. The basis for the classifications rest on several epidemiology studies which have several deficiencies. These studies did not account for exposure to other substances, some known to be animal or potential human carcinogens, social influences (smoking, etc.) and included small numbers of subjects. Based on the overall weight of evidence from all human and chronic animal studies, no definitive causal relationship between sulfuric acid mist exposure and respiratory tract tumors has been shown. When handling this material avoid the creation of mist.

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<b>Toxicity:</b>	Inorganic phosphates have the potential to increase the growth of freshwater algae, whose eventual death will reduce the available oxygen for aquatic life.	
<b>Degradation Products:</b>	<b>Biodegradation:</b>	Under anaerobic conditions, microorganisms may degrade the product
	<b>Photodegradation:</b>	No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Sewage disposal recommendations : This material is hazardous to the aquatic environment. Keep out of sewers and waterways.
- Waste disposal recommendations : Place in an appropriate container and dispose of the contaminated material at a licenced site.
- Additional information : Dispose of waste material in accordance with all local, regional, national, and international regulations.

## SECTION 14: Transport information

In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

- UN-No.(DOT) : 3264
- DOT NA no. UN3264

### 14.2. UN proper shipping name

- DOT Proper Shipping Name : Corrosive liquid, acidic, inorganic, n.o.s.  
Contains: Phosphoric Acid and Sulfuric Acid
- Department of Transportation (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Hazard Classes
- Hazard labels (DOT) : 8 - Corrosive substances



- DOT Symbols : G - Identifies PSN requiring a technical name
- Packing group (DOT) : II - Medium Danger

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DOT Special Provisions (49 CFR 172.102) : **IB3** - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

**T7** - 4 178.274(d)(2) Normal..... 178.275(d)(3)

**TP1**- The maximum degree of filling must not exceed the degree of filling determined by the following:

$$\left( \text{Degree of filling} = \frac{97}{1 + \alpha (t_r - t_f)} \right)$$

Where:

$t_r$  is the maximum mean bulk temperature during transport, and  $t_f$  is the temperature in degrees celsius of the liquid during filling (For additional clarification, see 49 CFR 172.102(8)).

**TP28** - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

## 14.3. Additional information

Emergency Response Guide (ERG) Number : 154

Reportable Quantity : 5000 pounds (100% Phosphoric Acid)  
1000 pounds (100% Sulfuric Acid)  
1000 pounds (100% Nitric Acid)

Other information : No supplementary information available.

## Overland transport

No additional information available

## Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

## Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

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IATA ERG Number : 8L

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Phosbrite Coproduct	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 302 (Specific toxic chemical listings) Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

Phosphoric acid (7664-38-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Nitric acid (7697-37-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 302 (Specific toxic chemical listings) Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	1.0 %

### 15.2. US State regulations

The following states have an OSH program approved by OSHA. If you are located in any of these states you may be under state jurisdiction rather than federal jurisdiction and your state may have more stringent requirements than OSHA. You should consult your state regulations to ensure compliance.

Alaska	Indiana	Minnesota	North Carolina	Utah
Arizona	Iowa	Nevada	Oregon	Vermont
California	Kentucky	New Mexico	Puerto Rico	*Virgin Islands
*Connecticut	Maryland	*New Jersey	South Carolina	Virginia
Hawaii	Michigan	*New York	Tennessee	Washington
*Illinois				Wyoming

\*The state plans in these states apply only to public sector employers. In these states private sector employers are subject to USOL – OSHA jurisdiction. All other state plans apply to both public and private sector employers.

Sulfuric acid (7664-93-9)
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute
U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities
U.S. - Hawaii - Occupational Exposure Limits - STELs

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U.S. - Hawaii - Occupational Exposure Limits - TWAs  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Illinois - Toxic Air Contaminant Carcinogens  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Maine - Air Pollutants - Hazardous Air Pollutants  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 25 Ft to Less Than 40 Ft

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U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 40 Ft to Less Than 75 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

## Phosphoric acid (7664-38-2)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Hawaii - Occupational Exposure Limits - STELs  
U.S. - Hawaii - Occupational Exposure Limits - TWAs  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Massachusetts - Allowable Ambient Limits (AALs)  
U.S. - Massachusetts - Allowable Threshold Concentrations (ATCs)  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Threshold Effects Exposure Limits (TELs)  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - STELs  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Michigan - Polluting Materials List  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELs  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - STELs

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U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - STELs  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 25 Ft to Less Than 40 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 40 Ft to Less Than 75 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet

## **Nitric acid (7697-37-2)**

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute  
U.S. - California - SCAQMD - Toxic Air Contaminants With Proposed Risk Values  
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)  
U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)  
U.S. - Delaware - Accidental Release Prevention Regulations - Sufficient Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Threshold Quantities  
U.S. - Delaware - Accidental Release Prevention Regulations - Toxic Endpoints  
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities  
U.S. - Hawaii - Occupational Exposure Limits - STELs  
U.S. - Hawaii - Occupational Exposure Limits - TWAs  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations  
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs)  
U.S. - Idaho - Occupational Exposure Limits - TWAs  
U.S. - Illinois - Toxic Air Contaminants  
U.S. - Louisiana - Reportable Quantity List for Pollutants  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Conc. - Reporting Category 2  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2  
U.S. - Massachusetts - Right To Know List  
U.S. - Massachusetts - Toxics Use Reduction Act  
U.S. - Michigan - Occupational Exposure Limits - STELs  
U.S. - Michigan - Occupational Exposure Limits - TWAs  
U.S. - Michigan - Polluting Materials List  
U.S. - Michigan - Process Safety Management Highly Hazardous Chemicals  
U.S. - Minnesota - Chemicals of High Concern  
U.S. - Minnesota - Hazardous Substance List  
U.S. - Minnesota - Permissible Exposure Limits - STELs  
U.S. - Minnesota - Permissible Exposure Limits - TWAs  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour  
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances  
U.S. - New Jersey - Environmental Hazardous Substances List  
U.S. - New Jersey - Right to Know Hazardous Substance List



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U.S. - New Jersey - Special Health Hazards Substances List  
U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS)  
U.S. - New York - Occupational Exposure Limits - TWAs  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances  
U.S. - North Carolina - Control of Toxic Air Pollutants  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour  
U.S. - North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour  
U.S. - Ohio - Accidental Release Prevention - Threshold Quantities  
U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities  
U.S. - Oregon - Permissible Exposure Limits - TWAs  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour  
U.S. - South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations  
U.S. - South Carolina - Toxic Air Pollutants - Pollutant Categories  
U.S. - Tennessee - Occupational Exposure Limits - STELs  
U.S. - Tennessee - Occupational Exposure Limits - TWAs  
U.S. - Texas - Effects Screening Levels - Long Term  
U.S. - Texas - Effects Screening Levels - Short Term  
U.S. - Vermont - Permissible Exposure Limits - STELs  
U.S. - Vermont - Permissible Exposure Limits - TWAs  
U.S. - Washington - Permissible Exposure Limits - STELs  
U.S. - Washington - Permissible Exposure Limits - TWAs  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 25 Ft to Less Than 40 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Height 40 Ft to Less Than 75 Ft  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights 75 Feet or Greater  
U.S. - Wisconsin - Hazardous Air Contaminants - All Sources - Emissions From Stack Heights Less Than 25 Feet  
U.S. - Wyoming - Process Safety Management - Highly Hazardous Chemicals

## 15.3. Canadian regulations

### Phosbrite Coproduct

WHMIS Classification	Class C - Oxidizing Material Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class E - Corrosive Material
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### Sulfuric acid (7664-93-9)

Listed on the Canadian DSL (Domestic Substances List) inventory.  
Listed on the Canadian Ingredient Disclosure List – Disclosure at 1%

WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
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### Phosphoric acid (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.  
Listed on the Canadian Ingredient Disclosure List – Disclosure at 1%

WHMIS Classification	Class E - Corrosive Material
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### Nitric acid (7697-37-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

# Phosbrite Coproduct

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Listed on the Canadian Ingredient Disclosure List – Disclosure at 1%

WHMIS Classification	Class C - Oxidizing Material Class E - Corrosive Material
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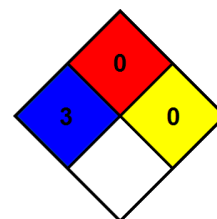
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## SECTION 16: Other information

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



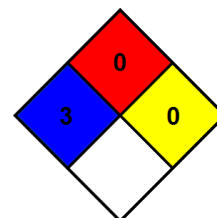
Full text of H-phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Ox. Liq. 3	Oxidising liquids Category 3
Skin Corr. 1A	skin corrosion/irritation Category 1A
STOT SE 3	H335 - May cause respiratory irritation
H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H332	Harmful if inhaled
H350	May cause cancer
H401	Toxic to aquatic life
H402	Harmful to aquatic life

NFPA health hazard : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



# Phosbrite Coproduct

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Previous PotashCorp MSDS Number      :    MSDS 98 – Phosbrite Coproduct

SDS US (GHS HazCom 2012)

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