



Post Apple Scientific, inc  
8893 Gulf Rd  
North East, PA 16428

## SAFETY DATA SHEET

Creation Date 19-Oct-2009

Revision Date 28-Oct-2014

Revision Number 1

### 1. Identification

**Product Name** PHOSPHORIC ACID

**Cat No. :** C6066, C6070, C6072

**Synonyms** Orthophosphoric acid

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**

Post Apple Scientific, inc.  
8893 Gulf Rd  
North East, PA 16428  
Tel: 814-725-3330

**Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

May be corrosive to metals  
Causes severe skin burns and eye damage  
May cause respiratory irritation

**Precautionary Statements****Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Use only outdoors or in a well-ventilated area  
 Keep only in original container

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Spills**

Absorb spillage to prevent material damage

**Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed  
 Store in corrosive resistant polypropylene container with a resistant inliner  
 Store in a dry place

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition / information on ingredients

Component	CAS-No	Weight %
Phosphoric acid	7664-38-2	>= 85
Water	7732-18-5	<= 15

### 4. First-aid measures

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

**Ingestion**

DO NOT induce vomiting unless directed to do so by a physician or poison control center. Call a physician or Poison Control Center immediately.

<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	Not applicable
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Oxidizing Properties</b>	Not applicable
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Oxides of phosphorus

### 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. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
3

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and storage

<b>Handling</b>	Use only under a chemical fume hood. Ensure adequate ventilation. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors/dust. Do not ingest.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric acid	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	(Vacated) TWA: 1 mg/m <sup>3</sup> (Vacated) STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	IDLH: 1000 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>

  

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Phosphoric acid	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>

*Legend*

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

Physical State	Liquid
Appearance	Clear, Viscous
Odor	Odorless
Odor Threshold	No information available
pH	1
Melting Point/Range	21 °C / 69.8 °F
Boiling Point/Range	158 °C / 316.4 °F
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	2 hPa @ 20°C
Vapor Density	3.4
Relative Density	1.680
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	300 °C
Viscosity	3.86 mPas @ 20°C

**10. Stability and reactivity**

**Reactive Hazard**

None known, based on information available

<b>Stability</b>	Hygroscopic.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Exposure to moisture.
<b>Incompatible Materials</b>	Strong oxidizing agents, Metals, Bases, Alcohols, Amines, halogenated agents
<b>Hazardous Decomposition Products</b>	Oxides of phosphorus
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	Contact with metals may evolve flammable hydrogen gas.

**11. Toxicological information**

**Acute Toxicity**

**Product Information**

<b>Oral LD50</b>	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
<b>Dermal LD50</b>	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
<b>Vapor LC50</b>	Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

**Component Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphoric acid	2600 mg/kg (Rat)	2740 mg/kg ( Rabbit )	850 mg/m <sup>3</sup> ( Rat ) 1 h

**Toxicologically Synergistic Products** No information available

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

<b>Irritation</b>	Causes burns by all exposure routes
<b>Sensitization</b>	No information available
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Phosphoric acid	7664-38-2	Not listed	Not listed	Not listed	Not listed	Not listed
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**12. Ecological information**

**Ecotoxicity**

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea

Phosphoric acid	Not listed	98 - 106 mg/L LC50 96 h	Not listed	> 100 mg/L EC50 = 48 h
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**Persistence and Degradability** Miscible with water Persistence is unlikely based on information available.  
**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

**DOT**

**UN-No** UN1805  
**Proper Shipping Name** PHOSPHORIC ACID SOLUTION  
**Hazard Class** 8  
**Packing Group** III

**TDG**

**UN-No** UN1805  
**Proper Shipping Name** PHOSPHORIC ACID SOLUTION  
**Hazard Class** 8  
**Packing Group** III

**IATA**

**UN-No** UN1805  
**Proper Shipping Name** PHOSPHORIC ACID, SOLUTION  
**Hazard Class** 8  
**Packing Group** III

**IMDG/IMO**

**UN-No** UN1805  
**Proper Shipping Name** PHOSPHORIC ACID, SOLUTION  
**Hazard Class** 8  
**Packing Group** III

### 15. Regulatory information

**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Phosphoric acid	X	X	-	231-633-2	-		X	X	X	X	X
Water	X	X	-	231-791-2	-		X	-	X	X	X

**Legend:**

- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable  
**SARA 313** Not applicable

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard Yes  
 Chronic Health Hazard No  
 Fire Hazard No  
 Sudden Release of Pressure Hazard No  
 Reactive Hazard No

**Clean Water Act**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Phosphoric acid	X	5000 lb	-	-

**Clean Air Act** Not applicable

**OSHA** Occupational Safety and Health Administration  
 Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Phosphoric acid	5000 lb	-

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Phosphoric acid	X	X	X	-	X
Water	-	-	X	-	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class** E Corrosive material



**16. Other information**

Prepared By Regulatory Affairs

Post Apple Scientific, inc.  
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**Creation Date** 19-Oct-2009  
**Revision Date** 28-Oct-2014  
**Print Date** 28-Oct-2014  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided on this Safety Data Sheet 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 SDS**