

MATERIAL SAFETY DATA SHEET

Phosphoric Acid

SECTION 1 . Product and Company Identification

Product Name and Synonym: Phosphoric Acid
Product Code: P2380
Material Uses:
Manufacturer: Science Stuff
1104 Newport Ave
Austin, TX 78753
(512) 837-6020
Entry Date : 6/13/2013
Print Date: 6/13/2013
24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	3			
Flammability:	0			
Reactivity:	1			
Hazard Rating:				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
NA=Not Applicable		NE=Not Established		

SECTION 2 HAZARD IDENTIFICATION

Causes severe irritation and burns. May be harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical state: Liquid.
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview:
DANGER!
CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS
HARMFUL IF INHALED OR SWALLOWED.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
RESPIRATORY TRACT, SKIN, EYES, LENS OR CORNEA

Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Keep container tightly closed and sealed until ready for use. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Eyes: Corrosive to eyes. Causes burns.
Skin: Corrosive to the skin. Causes burns.
Inhalation: Toxic by inhalation. Corrosive to the respiratory system.
Ingestion: Toxic if swallowed. May cause burns to mouth, throat and stomach.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Target organs: May cause damage to the following organs:
upper respiratory tract, skin, eyes, central nervous system (CNS).
Medical conditions aggravated by over-exposure:
Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product

SECTION 3 MIXTURE COMPONENTS

Phosphoric Acid

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input checked="" type="checkbox"/>	Phosphoric Acid 85% w/w	CAS# 7664-38-2	100%	V/V	TWA 1 mg/m ³ STEL 3mg/m ³

SECTION 4 FIRST AID MEASURES

Causes severe irritation and burns. May be harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Water May be used to keep fire exposed containers cool.

Fire / Explosion Hazards: can react with common metals to liberate flammable and potentially explosive hydrogen gas. May form hazardous fumes.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Wear protective clothing and respiratory protection from mists. Dike spill with sand or clay to keep out of sewer system. Cover small spill with sodium bicarbonate or soda ash.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-Proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

Phosphoric Acid

SECTION 7 HANDLING AND STORAGE

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: NIOSH/MSHA-approved respirator

Ventilation

Local Exhaust

Mechanical

Protective Gloves: Neoprene or heavy rubber.

Eye Protection: Goggles and Face Shield

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure. Maintain eye wash and safety shower.

Product name - United States –

Phosphoric Acid

ACGIH TLV (United States, 1/2006)

STEL: 3 mg/m³ 15 minute(s) Form: All forms

TWA: 1 mg/ m³ 8 hour(s) Form: All forms

NIOSH REL (United States, 12/2001)

STEL: 3 mg/m³ 15 minute(s) Form: All forms

TWA: 1 mg/ m³ 10 hour(s) Form: All forms

OSHA PEL (United States, 8/1997)

TWA: 1 mg/m³ 8 hour(s) Form: All forms

OSHA PEL 1989 (United States, 3/1989)

STEL: 3 mg/m³ 15 minute(s) Form: All forms

TWA: 1 mg/ m³ 8 hour(s) Form: All forms

Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended: splash goggles, face shield

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended
safety apron

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is

Phosphoric Acid

necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Recommended:

neoprene

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	-70°F	Percent Volatile by Volume:	>99
Boiling Point:	300°F	Evaporation Rate	Information not available
Vapor Pressure:	6 mm Hg at 68°F	Evaporation Standard	
Vapor Density:	3.4	Auto Ignition Temp	Information not available
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	Information not available
Appearance /Odors:	Colorless, viscous liquid	Upper Flamm. Limit in Air	Information not available
Flash Point:	N/A		
Specific Gravity:	1.685		

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability:	Stable
Conditions to Avoid:	Moisture
Materials to Avoid:	Metals, strong alkalis
Hazardous Decomposition Products:	Phosphorus compounds
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

SECTION 11 Toxicological Information

Toxicity data- United States- Product/ ingredient name:

Phosphoric Acid			
LD50 2740 mg/kg	Dermal		Rabbit
LD50 2740 mg/kg	Dermal		Rabbit
LD50 1530 mg/kg	Oral		Rat
LD50 1530 mg/kg	Oral		Rat
LC50 850 mg/m3	Inhalation Vapor		Rat

Carcinogenic effects: No known significant effects or critical hazards.

Mutagenic effects: No known significant effects or critical hazards.

Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards.

SECTION 12 Ecological Information

Phosphoric Acid

Environmental effects : No known significant effects or critical hazards.
Other adverse effects : No known significant effects or critical hazards.

SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 Transport Information

DOT Classification: UN1805, Phosphoric Acid, 8, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States

HCS Classification:

Toxic material

Target organ effects

Corrosive material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed

TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found

SARA 302/304 emergency planning and notifications: No products were found

SARA 302/304/311/312 hazardous chemicals: Phosphoric Acid

SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Phosphoric Acid

Immediate (acute) health hazard

Clean Water Act (CWA) 307: No products were found

Clean Water Act (CWA) 311: Phosphoric Acid

Clean Air Act (CAA) 112 accidental release prevention: No products were found

Clean Air Act (CAA) 112 regulated flammable substance: No products were found.

Clean Air Act (CAA) 112 regulated toxic substance: No products were found

DEA List I Chemicals : not listed
(Precursor Chemicals)

DEA List II Chemicals : not listed
(essential Chemicals)

Canada

WHMIS (Canada) :

Class E: Corrosive material

Canadian lists : CEPA Toxic Substance: This material is not listed.

Canadian ARET: This material is not listed.

Canadian NPRI: This material is not listed.

Alberta Designated Substances: This material is not listed.

Ontario Designated Substances: This material is not listed.

Quebec Designated Substances: This material is not listed.

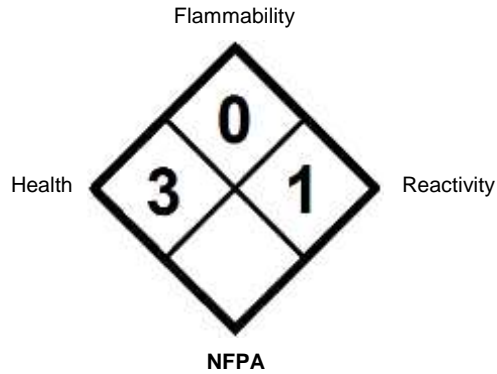
CEPA DSL/ CEPA NDSL : CEPA DSL:

This material is listed or exempted.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Phosphoric Acid



Revisions

3/14/2013	0.1	Review date LS
3/22/2012	0	Creation date LS

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.