

MSDS# 18691

Section 1 - Chemical Product and Company Identification

MSDS Name: Phosphoric acid, 85+% solution in water

Catalog Numbers: AC201140000, AC201140010, AC201140025, AC201140050, AC201145000, AC295700000, AC295700010, AC295700025, AC389020000, AC389020025, AC389021000, AC389021000, AC389025000, AC424040000, 42404-0025, 42404-5000, A242-1, A242-212, A242-212001, A242-212LC, A242-4, A242-4LC, A242-500, A242FB115, A242FB19, A242FB200, A242FB50, A242J500, A242P-4, A242P-500, A242SK-212, A242SS200, A242SS28, A242SS50, A260-500, A260J500, A365-1, A365-4, A365-4LC, A366-20, A366-4, A3664LC

Synonyms: Orthophosphoric acid.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 7664-38-2
Chemical Name: Phosphoric acid
%: 85
EINECS#: 231-633-2
Hazard Symbols: C

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: <15
EINECS#: 231-791-2
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: C



Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Hygroscopic (absorbs moisture from the air). Causes burns by all exposure routes. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

- Eye:** May cause irreversible eye injury. Contact with liquid is corrosive to the eyes and causes severe burns.
- Skin:** Contact with liquid is corrosive and causes severe burns and ulceration. Causes gastrointestinal tract burns. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause
- Ingestion:** hemorrhaging of the digestive tract. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
- Inhalation:** Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Causes chemical burns to the respiratory tract.
- Chronic:** Prolonged inhalation may cause respiratory tract inflammation and lung damage. Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

Section 4 - First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
- Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Ingestion:** Do not induce vomiting. Get medical aid immediately. Call a poison control center.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Notes to Physician:** Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.
- Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
- Autoignition Temperature:** Not applicable.
- Flash Point:** Not applicable.
- Explosion Limits:** Not available
- Lower:**
- Explosion Limits:** Not available
- Upper:**
- NFPA Rating:** health: 3; flammability: 0; instability: 1;

Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Provide ventilation. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

- Handling:** Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.
- Storage:** Store in a cool, dry place. Store in a tightly closed container. Corrosives area. Do not store in metal containers.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Phosphoric acid	1 mg/m ³ ; 3 mg/m ³ STEL	1 mg/m ³ TWA 1000 mg/m ³ IDLH	1 mg/m ³ TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs: Phosphoric acid: 1 mg/m³ TWA Water: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: APHA: 10 max

Odor: odorless

pH: Not available

Vapor Pressure: Not available

Vapor Density: 3.4 (air=1)

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 158 deg C @ 760 mmHg (316.40°F)

Freezing/Melting Point: 21 deg C (69.80°F)

Decomposition Temperature:

Solubility in water: Miscible

Specific Gravity/Density: 1.680

Molecular Formula: H₃O₄P

Molecular Weight: 98

Section 10 - Stability and Reactivity

Chemical Stability: Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid:

Incompatible materials, metals, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials

Metals, bases, alcohols, amines, halogenated agents, organic peroxides, amides, azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), carbamates (e.g. carbanolate, carbofuran), esters (e.g. butyl acetate, ethyl acetate, propyl formate), fluorides (inorganic, e.g. ammonium fluoride, calcium fluoride, cesium fluoride), phenols and cresols, organophosphates, phosphothioates (e.g. methylparathion, parathion, phorate, thionazin), epoxides (e.g. butyl glycidyl ether), combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane), explosives (e.g. ammonium nitrate, hydrazoic acid, sodium azide), nitromethane, sodium tetrahydroborate, mercaptans, aldehydes, ketones, glycols, cyanides, sulfides, caustics.

Hazardous

Decomposition Products

Phosphine, oxides of phosphorus, hydrogen gas.

Hazardous

Polymerization

May occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7664-38-2: TB6300000

CAS# 7732-18-5: ZC0110000

RTECS:

CAS# 7664-38-2: Draize test, rabbit, eye: 119 mg Severe;

Draize test, rabbit, skin: 595 mg/24H Severe;

LD50/LC50: Inhalation, mouse: LC50 = 25.5 mg/m³;
Inhalation, rat: LC50 = >850 mg/m³/1H;
Inhalation, rat: LC50 = 25.5 mg/m³;
Oral, mouse: LD50 = 1.25 gm/kg;
Oral, rat: LD50 = 1530 mg/kg;
Oral, rat: LD50 = 1.25 gm/kg;
Skin, rabbit: LD50 = 2740 mg/kg;
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RTECS:
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;
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Carcinogenicity: Phosphoric acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Mosquito Fish: LC50 = 138 mg/L; 96 Hr; Unspecified

Other: Dangerous to aquatic life in high concentrations. Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: PHOSPHORIC ACID SOLUTION

Hazard Class: 8

UN Number: UN1805

Packing Group: III

Canada TDG

Shipping Name: PHOSPHORIC ACID SOLUTION

Hazard Class: 8

UN Number: UN1805

Packing Group: III

USA RQ: CAS# 7664-38-2: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7664-38-2: 1

CAS# 7732-18-5: Not available

Canada

CAS# 7664-38-2 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7664-38-2 is listed on Canada's Ingredient Disclosure List
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7664-38-2 is listed on the TSCA
Inventory.

CAS# 7732-18-5 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/06/1999

Revision #11 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
