

# MATERIAL SAFETY DATA SHEET

## Section 1 - Chemical Product and Company Identification

**MSDS Name:** m-Phosphoric Acid, Glacial  
**Catalog Numbers:** A280-100, A280-3, A280-500, A280ME  
**Synonyms:** Metaphosphoric Acid; Glacial Phosphoric 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

-----  
**CAS#:** 37267-86-0  
**Chemical Name:** meta-Phosphoric Acid  
**%:** 37-43  
**EINECS#:** 253-433-4  
**Hazard Symbols:**  
**Risk Phrases:**  
-----

-----  
**CAS#:** 50813-16-6  
**Chemical Name:** Sodium meta-Phosphate  
**%:** 57-63  
**EINECS#:** 256-779-4  
**Hazard Symbols:**  
**Risk Phrases:**  
-----

Text for R-phrases: see Section 16

**Hazard Symbols:** C



**Risk Phrases:** 34

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Danger! Causes eye and skin burns. Causes digestive and respiratory tract burns. Corrosive to metal.  
Target Organs: Respiratory 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.

**Ingestion:** Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause 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.

**Chronic:** Prolonged inhalation may cause respiratory tract inflammation and lung damage. Prolonged or repeated skin contact may cause dermatitis. Repeated contact may cause corneal damage.

### 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. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:**

### 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. Combustion generates toxic fumes.

**Extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

**Autoignition:** Not applicable.

**Temperature:**

**Flash Point:** Not applicable.

**Explosion Limits:** Not available

**Lower:**

**Explosion Limits:** Not available

**Upper:**

**NFPA Rating:** health: 3; flammability: 0; instability: 0;

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Cover with sand, dry lime or soda ash and place in a closed container for disposal. Provide ventilation.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Minimize dust generation and accumulation. Do not get on skin or in eyes. Do not ingest or inhale.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Do not store in metal containers.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**  
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits** +-----+-----+

Chemical Name	ACGIH	NIOSH	OSHA -
Final PELs			

meta-Phosphoric Acid listed	none listed	none listed	none listed
Sodium meta-Phosphate listed	none listed	none listed	none listed

OSHA Vacated PELs: meta-Phosphoric Acid: None listed Sodium meta-Phosphate: None listed

**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 gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** 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.

**Section 9 - Physical and Chemical Properties**

**Physical State:** Crystals  
**Color:** clear colorless  
**Odor:** none reported  
**pH:** Acidic  
**Vapor Pressure:** Negligible.  
**Vapor Density:** Not available  
**Evaporation Rate:** Negligible.  
**Viscosity:** Not available  
**Boiling Point:** Not applicable.  
**Freezing/Melting Point:** Not available  
**Decomposition Temperature:** Not available  
**Solubility in water:** Soluble in water.  
**Specific Gravity/Density:** 2.4  
**Molecular Formula:** HPO3  
**Molecular Weight:** 79.979

**Section 10 - Stability and Reactivity**

- Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions. In water slowly forms ortho-Phosphoric acid.
- Conditions to Avoid:** Incompatible materials, contact with water, metals, excess heat.
- Incompatibilities with Other Materials:** Carbonates, metal oxides, Solutions attack some metals., cyanides, sulfides.
- Hazardous Decomposition Products:** Oxides of phosphorus.
- Hazardous Polymerization:** Has not been reported.

**Section 11 - Toxicological Information**

**RTECS#:** CAS# 37267-86-0: None listed  
CAS# 50813-16-6: None listed

**LD50/LC50:** RTECS: Not available. RTECS: Not available.  
**Carcinogenicity:** meta-Phosphoric Acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Sodium meta-Phosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
**Epidemiology:** Not available  
**Teratogenicity:** Not available  
**Reproductive:** Not available  
**Neurotoxicity:** Not available  
**Mutagenicity:** Not available  
**Other:** Not available

#### Section 12 - Ecological Information

**Other:** No information available.

#### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. RCRA P-Series: None listed. RCRA U-Series: None listed.

#### Section 14 - Transport Information

US DOT  
Shipping Name: PHOSPHORIC ACID, SOLID  
Hazard Class: 8  
UN Number: UN3453  
Packing Group: III  
Canada TDG  
Shipping Name: PHOSPHORIC ACID, SOLID  
Hazard Class: 8  
UN Number: UN3453  
Packing Group: III

#### Section 15 - Regulatory Information

##### US Federal

##### TSCA

CAS# 37267-86-0 is listed on the TSCA Inventory.  
CAS# 50813-16-6 is not listed on the TSCA Inventory. It is for research and development use only.

**Health & Safety Reporting List** None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules** None of the chemicals in this product are under a Chemical Test Rule.  
**Section 12b** None of the chemicals are listed under TSCA Section 12b.  
**TSCA Significant New Use Rule** None of the chemicals in this material have a SNUR under TSCA.  
**CERCLA Hazardous Substances and corresponding RQs** None of the chemicals in this material have an RQ.  
**SARA Section 302 Extremely Hazardous Substances** None of the chemicals in this product have a TPQ.  
**SARA Codes** CAS # 37267-86-0: acute.  
**Section 313** No chemicals are reportable under Section 313.

**Clean Air Act:** This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:** None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:  
STATE** meta-Phosphoric Acid is not present on state lists from CA, PA, MN, MA, FL, or NJ. Sodium meta-Phosphate is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

**California No Significant Risk Level:** None of the chemicals in this product are listed.

**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# 37267-86-0: 1

CAS# 50813-16-6: 1

Canada

CAS# 37267-86-0 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# 37267-86-0 is not listed on Canada's Ingredient Disclosure List.

CAS# 50813-16-6 is not listed on Canada's Ingredient Disclosure List.

**Section 16 - Other Information**

**MSDS Creation Date:** 12/12/1997

**Revision #4 Date** 10/03/2005

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.

