

**MSDS** *Material Safety Data Sheet*

From: Avantor Performance Materials, Inc.  
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24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtrec: 703-527-3887

**NOTE:** CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service, 1-855-AVANTOR (855-282-6867) for assistance.

## PHOSPHORIC ACID META

### 1. Product Identification

**Synonyms:** Metaphosphoric acid  
**CAS No.:** Not applicable to mixtures.  
**Molecular Weight:** Not applicable to mixtures.  
**Chemical Formula:** Not applicable.  
**Product Codes:**  
J.T. Baker: 0252  
Macron: 2816

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Metaphosphoric Acid	37267-86-0	35%	Yes
Sodium Metaphosphate	10361-03-2	65%	Yes

### 3. Hazards Identification

#### Emergency Overview

**DANGER! CAUSES BURNS TO SKIN, EYES, RESPIRATORY AND GASTROINTESTINAL TRACTS. HARMFUL IF SWALLOWED OR INHALED.**

**SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

Health Rating: 3 - Severe  
Flammability Rating: 0 - None  
Reactivity Rating: 2 - Moderate  
Contact Rating: 3 - Severe (Corrosive)  
Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES  
Storage Color Code: White (Corrosive)

## Potential Health Effects

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Information on the human health effects from exposure to this substance is limited.

### **Inhalation:**

Corrosive. An irritant to the respiratory tract with symptoms of sore throat and labored breathing.

### **Ingestion:**

Corrosive. Causes burns to mouth, throat, and esophagus with associated vomiting and abdominal pain.

### **Skin Contact:**

Corrosive. Irritating to skin tissue; may cause redness, pain, and burns.

### **Eye Contact:**

Corrosive. Damaging to eye tissue; may cause pain and blurred vision.

### **Chronic Exposure:**

Prolonged exposure to vapors from aqueous solutions may cause erosion of teeth.

### **Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

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## 4. First Aid Measures

### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

### **Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### **Skin Contact:**

In case of contact, wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

### **Eye Contact:**

Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

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## 5. Fire Fighting Measures

### **Fire:**

Not considered to be a fire hazard. Liquid phosphoric acid reacts with active metals (e. g. aluminum, zinc, iron, etc.) and may liberate flammable hydrogen gas.

### **Explosion:**

Not considered to be an explosion hazard.

### **Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.

### **Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

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## 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

-OSHA Permissible Exposure Limit (PEL):

1 mg/m<sup>3</sup> (TWA) for phosphoric acid

-ACGIH Threshold Limit Value (TLV):

1 mg/m<sup>3</sup> (TWA), 3 mg/m<sup>3</sup> (STEL) for phosphoric acid

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with high efficiency particulate filter (NIOSH type N100 filter) may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type Ror P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### **Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

### **Appearance:**

Colorless, small, glassy scales (metaphosphoric acid); white powder (sodium metaphosphate).

### **Odor:**

Odorless.

### **Solubility:**

Very slowly soluble in cold water (metaphosphoric acid component).

### **Specific Gravity:**

2.4 (for metaphosphoric acid component)

### **pH:**

No information found.

### **% Volatiles by volume @ 21C (70F):**

No information found.

**Boiling Point:**

No information found.

**Melting Point:**

No information found.

**Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Slowly changes to orthophosphoric acid in water.

**Hazardous Decomposition Products:**

Phosphorus oxides may form when heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Bases.

**Conditions to Avoid:**

Moisture and incompatibles.

## 11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Metaphosphoric Acid (37267-86-0)	No	No	None
Sodium Metaphosphate (10361-03-2)	No	No	None

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

### Domestic (Land, D.O.T.)

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**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (METAPHOSPHORIC ACID, SODIUM METAPHOSPHATE)

**Hazard Class:** 8

**UN/NA:** UN3260

Packing Group: III

**Information reported for product/size:** 2.5KG

### International (Water, I.M.O.)

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**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (METAPHOSPHORIC ACID, SODIUM METAPHOSPHATE)

**Hazard Class:** 8

**UN/NA:** UN3260

Packing Group: III

**Information reported for product/size:** 2.5KG

### International (Air, I.C.A.O.)

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**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (METAPHOSPHORIC ACID, SODIUM METAPHOSPHATE)

**Hazard Class:** 8

**UN/NA:** UN3260

Packing Group: III

**Information reported for product/size:** 2.5KG

## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Metaphosphoric Acid (37267-86-0)	Yes	Yes	No	Yes
Sodium Metaphosphate (10361-03-2)	Yes	Yes	No	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	--Canada--		
		DSL	NDSL	Phil.
Metaphosphoric Acid (37267-86-0)	Yes	Yes	No	Yes
Sodium Metaphosphate (10361-03-2)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Metaphosphoric Acid (37267-86-0)	No	No	No	No
Sodium Metaphosphate (10361-03-2)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

Ingredient	CERCLA	-RCRA-		-TSCA-
		261.33	8(d)	

Metaphosphoric Acid (37267-86-0)	No	No	No
Sodium Metaphosphate (10361-03-2)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No  
 Reactivity: No (Mixture / Solid)

**Australian Hazchem Code:** 2X  
**Poison Schedule:** None allocated.  
**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

**16. Other Information**

**NFPA Ratings:** Health: 3 Flammability: 0 Reactivity: 0

**Label Hazard Warning:**  
 DANGER! CAUSES BURNS TO SKIN, EYES, RESPIRATORY AND GASTROINTESTINAL TRACTS.  
 HARMFUL IF SWALLOWED OR INHALED.

**Label Precautions:**  
 Do not get in eyes, on skin, or on clothing.  
 Do not breathe dust.  
 Keep container closed.  
 Use only with adequate ventilation.  
 Wash thoroughly after handling.

**Label First Aid:**  
 In all cases call a physician immediately. In case of contact, wipe off excess material from skin then immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Product Use:**  
 Laboratory Reagent.

**Revision Information:**  
 No Changes.

**Disclaimer:**  
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continued

**THIS MSDS/SDS IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PROPERLY TRAINED PERSON USING THIS PRODUCT, AND IS NOT INTENDED TO BE COMPREHENSIVE AS TO THE MANNER AND CONDITIONS OF USE, HANDLING, STORAGE, OR DISPOSAL OF THE PRODUCT. INDIVIDUALS RECEIVING THIS MSDS/SDS MUST ALWAYS EXERCISE THEIR OWN INDEPENDENT JUDGMENT IN DETERMINING THE APPROPRIATENESS OF SUCH ISSUES. ACCORDINGLY, AVANTOR PERFORMANCE MATERIALS ASSUMES NO LIABILITY WHATSOEVER FOR THE USE OF OR RELIANCE UPON THIS INFORMATION. NO SUGGESTIONS FOR USE ARE INTENDED AS, AND NOTHING HEREIN SHALL BE CONSTRUED AS, A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE, LOCAL, OR FOREIGN LAWS. AVANTOR PERFORMANCE MATERIALS REMINDS YOU THAT IT IS YOUR LEGAL DUTY TO MAKE ALL INFORMATION IN THIS MSDS/SDS AVAILABLE TO YOUR EMPLOYEES.**

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**Prepared by:** Environmental Health & Safety