

MSDS Number: **P3962** \* \* \* \* \* *Effective Date: 08/17/06* \* \* \* \* \* *Supersedes: 11/12/03*



From: Mallinckrodt Baker, Inc.  
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Phillipsburg, NJ 08865



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 (1-800-582-2537) for assistance.

# Phosphomolybdic Acid, x-Hydrate

## 1. Product Identification

**Synonyms:** Molybdophosphoric Acid, x-Hydrate  
**CAS No.:** 12026-57-2 (Anhydrous) 51429-74-4 (hydrated)  
**Molecular Weight:** Not applicable.  
**Chemical Formula:** H<sub>3</sub>PMo<sub>12</sub>O<sub>40</sub> . xH<sub>2</sub>O  
**Product Codes:** 0247

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hazardous		
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Phosphomolybdic Acid	12026-57-2	90 - 100%
Yes		

## 3. Hazards Identification

## Emergency Overview

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**DANGER! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. VAPORS CAUSE IRRITATION TO EYES AND RESPIRATORY TRACT. MAY AFFECT LIVER AND KIDNEYS.**

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

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Health Rating: 3 - Severe (Life)

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Contact Rating: 3 - Severe (Corrosive)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: White (Corrosive)

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## Potential Health Effects

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### Inhalation:

Inhalation can cause severe irritation of mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. High concentrations may cause lung damage.

### Ingestion:

Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea. May cause damage to the liver and kidneys.

### Skin Contact:

Corrosive. Can cause severe burns with discoloration and pain.

### Eye Contact:

Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. Vapors are irritating to the eyes causing redness and pain.

### Chronic Exposure:

No information found.

### Aggravation of Pre-existing Conditions:

No information found.

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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. Get medical attention 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:**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## 5. Fire Fighting Measures

**Fire:**

Not considered to be a fire hazard.

**Explosion:**

Not considered to be an explosion hazard.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire.

**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. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. 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):

5 mg/m<sup>3</sup> for soluble molybdenum compounds as Mo

15 mg/m<sup>3</sup> total dust, for insoluble molybdenum compounds as Mo

-ACGIH Threshold Limit Value (TLV):

Molybdenum, metal and insoluble compounds, inhalable fraction, as Mo: 10 mg/m<sup>3</sup>

Molybdenum, metal and insoluble compounds, respirable fraction, as Mo: 3 mg/m<sup>3</sup>

Molybdenum, soluble compounds, respirable fraction, as Mo: 0.5 mg/m<sup>3</sup>, A3 - Confirmed animal carcinogen with unknown relevance to humans

**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 particulate respirator (NIOSH type N100 filters) may be worn for 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 R or 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 full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

**Appearance:**

Yellow Crystalline solid.

**Odor:**

No information found.

**Solubility:**

Appreciable (> 10%)

**Specific Gravity:**

3.10

**pH:**

No information found.

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

N/A

**Boiling Point:**

No information found.

**Melting Point:**

No information found.

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

Not applicable.

**Vapor Pressure (mm Hg):**

Not applicable.

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

No information found.

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

Phosphorus oxides may form when heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong bases.

**Conditions to Avoid:**

Heat and incompatibles.

## 11. Toxicological Information

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

Ingredient Category	---NTP Carcinogen---		IARC
	Known	Anticipated	
Phosphomolybdic Acid (12026-57-2)	No	No	None

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 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.

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## 14. Transport Information

**Domestic (Land, D.O.T.)**  
-----**Proper Shipping Name:** CORROSIVE, SOLID, N.O.S. (PHOSPHOMOLYBDIC ACID)**Hazard Class:** 8**UN/NA:** UN1759**Packing Group:** III**Information reported for product/size:** 500G**International (Water, I.M.O.)**  
-----**Proper Shipping Name:** CORROSIVE, SOLID, N.O.S. (PHOSPHOMOLYBDIC ACID)**Hazard Class:** 8**UN/NA:** UN1759**Packing Group:** III**Information reported for product/size:** 500G**International (Air, I.C.A.O.)**  
-----**Proper Shipping Name:** CORROSIVE, SOLID, N.O.S. (PHOSPHOMOLYBDIC ACID)**Hazard Class:** 8**UN/NA:** UN1759**Packing Group:** III**Information reported for product/size:** 500G

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## 15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----  
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Ingredient	TSCA	EC	Japan
Australia			
Phosphomolybdic Acid (12026-57-2)	Yes	Yes	Yes

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

Ingredient	Korea	DSL	Canada NDSL	Phil.
Phosphomolybdic Acid (12026-57-2)	Yes	Yes	No	No

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

Ingredient	RQ	TPQ	List	Chemical
Phosphomolybdic Acid (12026-57-2)	No	No	No	No

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

Ingredient	CERCLA	RCRA 261.33	TSCA 8 (d)
Phosphomolybdic Acid (12026-57-2)	No	No	No

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

**Australian Hazchem Code:** 1WE  
**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! CORROSIVE. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR INHALED. VAPORS CAUSE IRRITATION TO EYES AND RESPIRATORY TRACT. MAY AFFECT LIVER AND KIDNEYS.

**Label Precautions:**  
 Do not get in eyes, on skin, or on clothing.

Do not breathe dust or vapor.  
Keep container closed.  
Use only with adequate ventilation.  
Wash thoroughly after handling.

**Label First Aid:**

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. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases get medical attention immediately.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

MSDS Section(s) changed since last revision of document include: 3.

**Disclaimer:**

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