MATERIAL SAFETY DATA SHEET
(MSDS)

Phosphonic acid

1. Product Identification

Synonyms: Orthophosphorous acid
CAS No.: 13598-36-2
Molecular Weight: 82.00
Chemical Formula: H₃PO₃

Urgent contact: Shanghai Sunivo Supply Chain Management Co., Ltd.
Tel: +86 21 3393 3299            Fax: +86 21 5830 7878
URL: www.sunivo.com
Address: Room 502, Building 5, Lane 289 Bisheng Rd., Pudong District, Shanghai, 201204 - P.R. of China

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>13598-36-2</td>
<td>Phosphorous acid</td>
<td>98%</td>
<td>237-066-7</td>
</tr>
</tbody>
</table>

Hazard Symbols: C

3. Hazards Identification

EMERGENCY OVERVIEW
Harmful if swallowed. Causes severe burns.
Potential Health Effects
Eye: Causes eye burns.
Skin: Causes skin burns.
Ingestion: Harmful if swallowed. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.
Inhalation: Causes chemical burns to the respiratory tract.
Chronic:

http://www.sunivo.com | MSDS |
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.
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

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.
Extinguishing Media: Use foam, dry chemical, or carbon dioxide.

6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

7. Handling and Storage

Handling: Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

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
CAS# 13598-36-2:

Personal Protective Equipment
Eyes: Wear chemical splash goggles and face shield.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.

9. Physical and Chemical Properties

Physical State: Crystals
Color: white
Odor: characteristic odor
pH: Not available
Vapor Pressure: Not available
Viscosity: Not available
Boiling Point: 200 deg C @760mmHg (392.00 °F)
Freezing/Melting Point: 73 deg C (163.40 °F)
Autoignition Temperature: Not available
Flash Point: > 100 deg C (> 212.00 deg F)
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature:
Solubility in water: Soluble
Specific Gravity/Density: 1.650
Molecular Formula: H3O3P
Molecular Weight: 82

10. Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Air sensitive.
Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid: Incompatible materials, exposure to air, exposure to moist air or water.
Incompatibilities with Other Materials Metals, strong bases.
Hazardous Decomposition Products Phosphine, oxides of phosphorus.
Hazardous Polymerization Will not occur.

11. Toxicological Information

RTECS#: CAS# 13598-36-2: SZ6400000

LD50/LC50: RTECS:
CAS# 13598-36-2: Oral, mouse: LD50 = 1700 mg/kg;
Oral, rat: LD50 = 1895 mg/kg;

Carcinogenicity: Phosphorous acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
12. Ecological Information

Other: See actual entry in RTECS for complete information.

13. Disposal Considerations

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

14. Transport Information

IATA  IMO  RID/ADR
Shipping Name: PHOSPHOROUS ACID  PHOSPHOROUS ACID  PHOSPHOROUS ACID
Hazard Class: 8 8 8
UN Number: 2834 2834 2834
Packing Group: III III III

15. Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: C
Risk Phrases:
R 22 Harmful if swallowed.
R 35 Causes severe burns.

Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
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# 13598-36-2: 1

Canada
CAS# 13598-36-2 is listed on Canada's DSL List

US Federal
TSCA
CAS# 13598-36-2 is listed on the TSCA Inventory.

16. Other Information

MSDS Creation Date: 7/16/1996
Revision #3 Date 4/25/2006

Disclaimer:

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