1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 1PAAN
Product Name: Phosphorous Acid Crystal
Trade Name: Phosphorous Acid Crystal
Company Name: Compass Chemical International LLC
5544 Oakdale Road SE
Smyrna, GA 30082
Phone Number: (678)904-4017

Web site address: www.compasschemical.com
Emergency Contact: Chemtrec
(800)424-9300
(404)696-6711

Intended Use: Intended for Industrial Use

2. HAZARDS IDENTIFICATION

Acute Toxicity: Oral, Category 4
Skin Corrosion/Irritation, Category 1A
Corrosive To Metals, Category 1

GHS Signal Word: Danger
GHS Hazard Phrases: H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.

GHS Precaution Phrases: P234 - Keep only in original container.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P305+340 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - If taken by mouth do NOT induce vomiting. If conscious, give plenty of water.
P314 - If on skin: Take off all contaminated clothing. Rinse skin with water/shower.
P315 - If侵入eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 - Specific treatment see Response/First aid section on this label.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P391 - Wear suitable protective clothing, such as: rubber gloves, impervious apron.
P403 - Do not get in eyes. Keep out of reach of children.
P404 - Do not inhale dust/vapours.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with all federal, state and local regulations.

GHS Storage and Disposal Phrases:
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with all federal, state and local regulations.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.
Phosphorous Acid Crystal

SAFETY DATA SHEET

Potential Health Effects
(Chronic): Effects may be delayed. Repeated contact may cause corneal damage.

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. Aspiration may lead to pulmonary edema. May cause systemic effects.

Skin Contact: Contact with liquid is corrosive and causes severe burns and ulceration. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color. Direct contact causes burns to skin, eyes, and respiratory tract.

Eye Contact: Corrosive, contact causes severe eye burns.

Ingestion: Causes gastrointestinal tract burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>10294-56-1</td>
<td>Phosphorous acid</td>
<td>99 - 100%</td>
<td>NA</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

In Case of Inhalation: In case of adverse exposure to vapors and/or aerosols, immediately remove the affected victim from exposure and get immediate medical attention. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration.

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash with plenty of soap and water. Wash clothing before reuse.

In Case of Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

In Case of Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is conscious, give milk or water to dilute stomach contents. Never give anything by mouth to an unconscious person. Keep victim warm and quiet. Get immediate medical advice/attention.

Signs and Symptoms Of Exposure: Shortness of breath, Cough.

Note to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability Classification: Non-Flammable

Flash Pt: NP

Explosive Limits:

Autoignition Pt: NA

Suitable Extinguishing Media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Do NOT get water inside containers. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray.

Unsuitable Extinguishing Media: When material is not involved in fire, do not use water on material itself.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use
water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with metals may evolve flammable hydrogen gas. Move containers from fire area if you can do it without risk.

Flammable Properties and Hazards:

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures: Complete suit protecting against chemicals. Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

Environmental Precautions: Observe all federal, state, and local environmental regulations. Freely miscible in water.

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. 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.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Wash thoroughly after handling. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes.

Precautions To Be Taken in Storing: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Corrosives area. Do not store in metal containers.


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Partial Chemical Name</th>
<th>OSHA TWA</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>10294-56-1</td>
<td>Phosphorous acid</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

Respiratory Equipment (Specify Type): 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.

Eye Protection: Wear chemical splash goggles and face shield.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): 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. Ventilation should be provided to control worker exposures and prevent health risks and as necessary to reduce, prevent and control dust, mist, vapor or aerosol generation.

Work/Hygienic/Maintenance Practices: Wash thoroughly after handling.

Environmental Exposure Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical States:</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance and Odor:</td>
<td>White.</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>74.00 °C (165.2 °F)</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>200.0 °C (392.0 °F)</td>
</tr>
<tr>
<td>Decomposition Temperature:</td>
<td>NA</td>
</tr>
<tr>
<td>Autoignition Pt:</td>
<td>NA</td>
</tr>
<tr>
<td>Flash Pt:</td>
<td>NP Method Used: Estimate</td>
</tr>
<tr>
<td>Explosive Limits:</td>
<td>LEL: N.D. UEL: N.D.</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1):</td>
<td>1.7 at 25.0 °C (77.0 °F)</td>
</tr>
<tr>
<td>Density:</td>
<td>NA</td>
</tr>
<tr>
<td>Bulk density:</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg):</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1):</td>
<td>NA</td>
</tr>
<tr>
<td>Evaporation Rate:</td>
<td>NA</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>NA</td>
</tr>
<tr>
<td>Saturated Vapor</td>
<td>NA</td>
</tr>
<tr>
<td>Concentration:</td>
<td>NA</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>NP</td>
</tr>
<tr>
<td>Octanol/Water Partition Coefficient:</td>
<td>Not available</td>
</tr>
<tr>
<td>pH:</td>
<td>Acidic</td>
</tr>
<tr>
<td>Percent Volatile:</td>
<td>N.A.</td>
</tr>
<tr>
<td>VOC / Volume:</td>
<td>NP</td>
</tr>
<tr>
<td>Particle Size:</td>
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</tr>
<tr>
<td>Heat Value:</td>
<td>NA</td>
</tr>
<tr>
<td>Corrosion Rate:</td>
<td>NA</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity:</td>
<td>Reacts with alkalis and generates heat.</td>
</tr>
<tr>
<td>Stability:</td>
<td>Unstable [ ] Stable [ X ]</td>
</tr>
<tr>
<td>Conditions To Avoid - Instability:</td>
<td>Dust generation, Exposure to air, Moisture.</td>
</tr>
<tr>
<td>Hazardous Decomposition Or Byproducts:</td>
<td>Oxides of Phosphorus, Phosphines.</td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions:</td>
<td>Will occur [ ] Will not occur [ X ]</td>
</tr>
<tr>
<td>Conditions To Avoid - Hazardous Reactions:</td>
<td>No data available.</td>
</tr>
</tbody>
</table>
11. TOXICOLOGICAL INFORMATION

Toxicological Information: Epidemiology: No information found.
Teratogenicity: No information available. Reproductive Effects: Mutagenicity:
Neurotoxicity:
Irritation or Corrosion: No information available.
Symptoms related to Toxicological Characteristics:
Chronic Toxicological Effects: No information available.
Carcinogenicity/Other Information:
CAS# 10294-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 13598-36-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>10294-56-1</td>
<td>Phosphorous acid</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

General Ecological Information: No information available.
Results of PBT and vPvB assessment: No information available.
Persistence and Degradability: No information available.
Bioaccumulative Potential: No information available.
Mobility in Soil: No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: 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. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification. Dispose of contents/container in accordance with all federal, state and local regulations.
RCRA P-Series: None listed.
RCRA U-Series: None listed.
Waste Disposal Method: D002

14. TRANSPORT INFORMATION

GHS Classification: Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed
Skin Corrosion/Irritation, Category 1A - Danger! Causes severe skin burns and eye damage
Corrosive To Metals, Category 1 - Warning! May be corrosive to metals

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Phosphorous acid.
DOT Hazard Class: CORROSIVE
UN/NA Number: UN2834 Packing Group: II
**Phosphorous Acid Crystal**

**SAFETY DATA SHEET**

**LAND TRANSPORT (Canadian TDG):**

TDG Shipping Name: PHOSPHOROUS ACID.

**MARINE TRANSPORT (IMDG/IMO):**

IMDG/IMO Shipping Name: PHOSPHOROUS ACID.

UN Number: [N]

Hazard Class: CORROSIVE

Packing Group: II

IMDG EMS Page: |

**AIR TRANSPORT (ICAO/IATA):**

ICAO/IATA Shipping Name: Phosphorous acid.

UN Number: 2834

Hazard Class: CORROSIVE

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10294-56-1</td>
<td>Phosphorous acid</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

This material meets the EPA [X] Yes [ ] No Acute (immediate) Health Hazard

'Hazard Categories' defined [ ] Yes [X] No Chronic (delayed) Health Hazard

for SARA Title III Sections [ ] Yes [X] No Fire Hazard

311/312 as indicated: [ ] Yes [X] No Sudden Release of Pressure Hazard

[ ] Yes [X] No Reactive Hazard

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Other US EPA or State Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>10294-56-1</td>
<td>Phosphorous acid</td>
<td>CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>International Regulatory Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>10294-56-1</td>
<td>Phosphorous acid</td>
<td>Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes; Australia ICS: Yes; China IECSC: Yes; Japan ENCS: Yes - (1)-421; Korea ECL: Yes - KE-28696; Philippines ICCS: Yes; Taiwan TCSCA: Yes; REACH: Yes - (P)</td>
</tr>
</tbody>
</table>

Regulatory Information Statement:

Regulatory information provided in this SDS was prepared for this product and is to be used only for the product in its present form. If this material is used as a component in another material or altered in any way, the information in this SDS may no longer be applicable. This document was generated for the purpose of distributing health, safety and environmental data.
16. OTHER INFORMATION

Revision Date: 03/21/2015
Preparer Name: Compass EHS Department  (404)696-6711  4071

Hazard Rating System:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
<td>J</td>
</tr>
</tbody>
</table>

HMIS: Flammability: 3  Instability: 0  Health: 3  Special Hazard: 1
NFPA: Flammability: 3  Health: 1  Special Hazards: 0

Additional Information About This Product: SDS Data Field Acronym Legend:

- NA- Not Available
- NP- Not Applicable
- NR- Not Required
- PR- Proprietary
- TS- Trade Secret.

Company Policy or Disclaimer: MANUFACTURER DISCLAIMER: NOTICE: We believe that the information contained on this Safety Data Sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily either all-inclusive or fully adequate in every circumstance. Also, these suggestions should not be confused with or followed in violation of applicable laws, regulation, rules or insurance requirements. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.