SECTION I: IDENTIFICATION

Product: CT 9130
Description: Phosphoric Acid
Company Identification: Chemtech, Inc.
1621 N. 1st St.
Winterset, IA  50273
Phone: 888-570-5333
Website: www.chemtechus.com

Company Emergency Telephone Number: CHEMTREC 1-800-424-9300

SECTION II: HAZARD(S) IDENTIFICATION

Physical Hazards: Not classified.

HEALTH HAZARDS

Acute Toxicity, Oral: Category 4
Skin Corrosion/Irritation: Category 1A
Serious Eye Damage/Irritation: Category 1

Environmental Hazards: Not classified.
OSHA Defined Hazards: Not classified.

LABEL ELEMENTS

Signal Word: Danger

Hazard Symbols:

Hazard Statement: Harmful if swallowed. - H302
Causes severe skin burns and eye damage. - H314
Causes serious eye damage. - H318

PRECAUTIONARY STATEMENTS

Prevention: Do not breathe dust/fumes/gas/mist/vapors/spray. - P260
Wash thoroughly after handling. - P264
Do not eat, drink or smoke when using this product. - P270
Wear protective gloves/protective clothing/eye protection/face protection. - P280

Response: IF SWALLOWED: Rinse mouth. - P301+330
Do NOT induce vomiting. - P331
IF ON SKIN (or hair). Take off immediately all contaminated clothing. Rinse skin with water or shower. - P303+361+353
IF INHALED: Move person to fresh air and keep comfortable for breathing. - P304+340
IF IN EYES: Rinse cautiously with water for several minutes. Remove contacts if present and easy to do.
Continue rinsing. - P305+351+338
Immediately call a POISON CENTER or doctor. - P310
Wash contaminated clothing before reuse. - P363
Storage: Store locked up. - P405

Disposal: Dispose of contents/container in accordance with local, state and federal regulations. - P501

Hazards Not Otherwise Classified (HNOS): None known.

Supplemental Information: None

SECTION III: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Weight - %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>7664-38-2</td>
<td>75%</td>
</tr>
<tr>
<td>*other components below reportable levels</td>
<td></td>
<td>25%</td>
</tr>
</tbody>
</table>

* Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Specific chemical identity and/or exact percentage of mixture has been withheld as a trade secret.

SECTION IV: FIRST AID MEASURES

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin Contact: Take off immediately all contaminated clothing. Rinse thoroughly with water or shower. Call a physician or POISON CONTROL CENTER immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or POISON CONTROL CENTER immediately.

Ingestion: Call a physician or POISON CONTROL CENTER immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

MOST IMPORTANT SYMPTOMS EFFECTS, ACUTE AND DELAYED

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

Indication of Immediate Medical Attention and Special Treatment Needed:

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General Information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION V: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, dry chemical powder, carbon dioxide (CO₂).

Unsuitable Extinguishing Media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific Hazards Arising from the Chemical: During fire, gases hazardous to health may be formed.

Special Protective Equipment and Precautions for Firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire Fighting Equipment/Instructions: Move containers from fire area if you can do so without risk.

Special Methods: Use standard firefighting procedures and consider the hazards of other involved materials.

General Fire Hazards: No unusual fire or explosion hazards noted.
SECTION VI: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Keep unnecessary personnel away. Keep people away from and upwind of a spill / leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillage cannot be contained. For personal protection see Section 8.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP

Small Spills: Wipe up with absorbent material (e.g. cloth or fleece). Clean surface thoroughly to remove residual contamination.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Environmental Precautions: Avoid discharge into drains, water courses or onto the ground.

SECTION VII: HANDLING AND STORAGE

Precautions Safe Handling: Provide adequate ventilation. Do not breathe mist or vapor. Do not get into eyes, on skin or on clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10).

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>PEL</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values:

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>STEL</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards:

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>STEL</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

Biological Limit Values: No biological exposure limits noted for the ingredient(s).

Appropriate Engineering Controls: Good general ventilation (typically 10 air exchanges for hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection: Wear appropriate chemical resistant clothing.

Hand Protection: Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Respiratory Protection: In case of insufficient ventilation wear suitable respiratory equipment.

Thermal Hazards: Wear appropriate thermal protective clothing, when necessary.

General Hygiene Considerations: Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance / Color</strong></td>
<td>Liquid / Clear</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Melting Point / Freezing Point</strong></td>
<td>108.23°F (42.35°C) estimated / 1°F (-17.22°C) estimated</td>
</tr>
<tr>
<td><strong>Boiling Point / Boiling Range</strong></td>
<td>364.55°F (184.75°C) estimated</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>999.0°F (537.2°C)</td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Flammability (Solid, gas)</strong></td>
<td>Combustible IIIB estimated</td>
</tr>
<tr>
<td><strong>Upper Flammability Limit</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Lower Flammability Limit</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>0.01 hPa estimated</td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.83 estimated</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Partition Coefficient</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Autoignition Temperature</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Decomposition Temperature</strong></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>No information available</td>
</tr>
</tbody>
</table>

SECTION X: STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability: Material is stable under normal conditions.

Possibility of Hazardous Reaction: Hazardous polymerization does not occur.

Conditions to Avoid: Contact with incompatible materials.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition: No hazardous decomposition products are known.

SECTION XI: TOXICOLOGICAL INFORMATION

Component Acute Toxicity: Harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid (CAS # 7664-38-2)</td>
<td>*1,530 mg/kg (Rat)</td>
<td>*2,740 mg/kg (Rabbit)</td>
</tr>
</tbody>
</table>

*Estimates for product may be based on additional component data not shown.

LIKELY ROUTES OF EXPOSURE

Inhalation: May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin Contact: Causes severe skin burns.
Eye Contact: Causes serious eye damage.
Ingestion: Causes digestive tract burns. Harmful if swallowed.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result.

Skin Corrosion/Irritation: Causes severe burns and eye damage.
Serious Eye Damage/Eye Irritation: Causes serious eye damage.

RESPIRATORY OR SKIN SENSITIZATION
Respiratory Sensitization: Not a respiratory sensitizer.
Skin Sensitization: This product is not expected to cause skin sensitization.
Germ Cell Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

CARCINOGENICITY
Reproductive Toxicity: Not classified.

SPECIFIC TARGET ORGAN TOXICITY
Single Exposure: Not classified.
Repeated Exposure: Not classified.
Aspiration Hazard: Not an aspiration hazard.
Chronic Effects: Prolonged inhalation may be harmful.

SECTION XII: ECOLOGICAL INFORMATION
Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful effect on the environment.
Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.
Other Adverse Effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

SECTION XIII: DISPOSAL CONSIDERATIONS
Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local, regional and/or national regulations.
Local Disposal Regulations: Dispose in accordance with all applicable regulations.
Hazardous Waste Code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste From Residues/Unused Products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residue. This material and its container must be disposed of in a safe manner (see Section 8: Disposal Considerations).

Contaminated Packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION XIV: TRANSPORT INFORMATION

DOT

UN Number: UN1805

UN Proper Shipping Name: Phosphoric Acid Solution

TRANSPORT HAZARD CLASS(ES)

Class: 8

Subsidiary Risk: -

Packing Group: III

Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.

ERG Number: 154

DOT information on packaging may be different from that listed.

SECTION XV: REGULATORY INFORMATION

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.


CERLA Hazardous Substance List (40 CFR 302.4):

Phosphoric Acid (CAS# 7664-38-2) Listed


SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA)

Hazard Categories: Immediate Hazard: Yes

Delayed Hazard: No

Fire Hazard: No

Pressure Hazard: No

Reactivity Hazard: No

SARA 302 Extremely Hazardous Substance: Not listed.

SARA 311 / 312 Hazardous Chemical: No

SARA 313 (TRI Reporting): Not regulated.

OTHER FEDERAL REGULATIONS

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.

Clean Air Act (CAA) Section 112r Accidental Release Prevention (40 CFR 68.130): Not regulated.

**US STATE REGULATIONS**

California Controlled Substances CA Department of Justice (California Health and Safety Code Section 11100): Not listed.

California Candidate Chemicals List - Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a)):
- Phosphoric Acid (CAS# 7664-38-2)

Massachusetts Right-to-Know Act - Substance List: Phosphoric Acid (CAS# 7664-38-2)

New Jersey Worker and Community Right-to-Know Act: Phosphoric Acid (CAS# 7664-38-2)

Pennsylvania Worker and Community Right-to-Know Law: Phosphoric Acid (CAS# 7664-38-2)

Rhode Island Right-to-Know Act: Phosphoric Acid (CAS# 7664-38-2)

California Proposition 65:
- California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
  This material is not known to contain any chemical currently listed as carcinogens or reproductive toxins.

**SECTION XVI: OTHER INFORMATION**

<table>
<thead>
<tr>
<th>Issue Date:</th>
<th>06/01/15</th>
<th>HAZARD RATINGS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version #:</td>
<td>1</td>
<td>NFPA: Health: 3 Flammability: 0 Instability: 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HMIS: Health: 3 Flammability: 0 Physical Hazards: 0</td>
</tr>
</tbody>
</table>

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