SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: LD Carlson Company
463 Portage Blvd
Kent, OH 44240
1-800-321-0315

Product Name: Phosphoric Acid 10% Solution
Product Code: PHO100
Recommended Use: Sparge water buffering aid
Revision Date: 12/9/2015

Chemical Emergency: Infotrac: 1-800-535-5053

SECTION 2: HAZARDS IDENTIFICATION

GHS Hazard Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion</td>
<td>Category 1</td>
</tr>
<tr>
<td>Corrosive to Metals</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Signal Word
DANGER!

Hazard Statements
- Causes severe skin burns and eye damage
- May be corrosive to metals

Precautionary Statements - Prevention
- Do not breathe mists or vapors
- Wash thoroughly after handling
- Wear protective gloves
- Keep only in original container

Precautionary Statements - Response
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- IF ON SKIN (or hair): Remove all contaminated clothing immediately. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
- Call a POISON CENTER or doctor/physician if you feel unwell
- Absorb spillage to prevent material damage

Precautionary Statements - Storage
- Store locked up
- Store in a corrosive resistant container with a resistant inner liner

Precautionary Statements - Disposal
- Dispose of contents/container to an approved waste disposal plant

SECTION 3: INFORMATION ON HAZARDOUS INGREDIENTS

Product is a mixture according to 29 CFR 1910.1200.

Hazardous Components

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>Cas #</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>7664-38-2</td>
<td>10%</td>
</tr>
</tbody>
</table>

Specific chemical identity and/or exact percentage of components has been withheld in accordance with a trade secret claim according to Appendix E 29 CFR 1910.1200.

SECTION 4: FIRST-AID MEASURES

First Aid Measures

General Advice: Harmful if swallowed. Causes severe skin burns and eye damage.

Eye Contact: Immediately flush with cool running water for at least 15 minutes while holding eyelids apart. Do not rub affected area. Remove contact lenses if applicable.

Skin Contact: Wash off immediately with soap and water while removing all contaminated clothes and shoes.
Ingestion: If swallowed, may cause burning of the mouth, throat and stomach. Call immediately for medical assistance. DO NOT induce vomiting. Rinse mouth with water, then drink 1-2 glasses of water. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air.

**Most Important Symptoms and Effects**

**Symptoms:** Severe burns to eyes and skin. Symptoms may include stinging, tearing, redness, swelling and blurred vision.

**Indication of any immediate medical attention and special treatment needed**

**Note to Physician:** Product is a corrosive material. Treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES**

**Flammable Properties**

**Flammability:** Not considered to be a fire hazard.

**Explosive Prop:** Not considered to be an explosive hazard.

**Extinguishing Media**

**Suitable:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

**Specific Hazards Arising from Chemical**

**Hazards:** During fire, gases hazardous to health may be formed.

**Protective equipment and precautions for fire-fighters**

**Fire-Fight Method:** In the event of a fire, fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Evacuate personnel to safe areas. Isolate hazard area and deny entry. Stay upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes or clothing.

**Environ. Precautions:** Prevent release to the environment if possible. Dike large spills to prevent material from entering streams or sewer systems.

**Clean-Up Method:** Soak-up with inert absorbent material and place into appropriate container for disposal. Clean contaminated area thoroughly with water. Prevent product from entering drains.

**SECTION 7: HANDLING AND STORAGE**

**Handling:** Use personal protective equipment when needed. Avoid contact with skin, eyes, and clothing. Wash hands before eating, drinking, or smoking. Remove contaminated clothes and wash before reuse. Use in a ventilated area.

**Storage:** Store in closed containers in cool, dry, well-ventilated area. Avoid overheating or freezing. Keep in properly labeled containers and out of reach of children.

**Incomp. Materials:** Oxidizing agents. Strong bases. Keep separate from alkalis. Avoid contact with metals.

**SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Hazardous Chemical</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>1 mg/m3</td>
<td>1 mg/m3</td>
</tr>
</tbody>
</table>

**Appropriate Engineering Controls**

**Eng. Controls:** Ensure adequate ventilation, especially in confined areas.

**Personal Protection Equipment (PPE)**

**Eyes:** Recommend safety goggles or shield.

**Respiratory:** Not usually necessary where ventilation is sufficient to maintain vapors under the TLV limit.

**Skin:** Avoid skin contact. Recommend chemical resistant gloves.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

**Physical State:** Liquid

**Freezing Point:** Not determined
Appearance: Clear Liquid
Color: Clear/pale amber
Odor: Odorless
Odor Threshold: Not determined
pH: 1.0
Flash Point: Not determined
Water Solubility: Soluble in water
Specific Gravity: 1.00
Melting Point: Not determined

Boiling Point: Not determined
Evaporation Rate: Not determined
Vapor Pressure: Not determined
Vapor Density: Not determined
Relative Density: Not determined
Flammability: Not determined
Part. Coefficient: Not determined
Auto-ignition Temp: Not determined
Decomp. Temp: Not determined

SECTION 10: STABILITY AND REACTIVITY
Stability: Stable under ordinary conditions of use and storage.
Haz. Decomposition: Thermal decomposition can lead to release of irritating and toxic gases and vapors.
Haz. Polymerization: No information available.
Incompatibilities: Oxidizing agents. Strong bases. Keep separate from alkalis. Avoid contact with metals.
Conditions to Avoid: Heat, moisture and incompatibles.

SECTION 11: TOXICOLOGY INFORMATION

Component Information

<table>
<thead>
<tr>
<th>Hazardous Chemical</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>&gt;1530 mg/kg</td>
<td>&gt; 2740 mg/kg</td>
</tr>
</tbody>
</table>

Potential Health Effects
Exposure Routes: Eye Contact, Dermal Contact, Ingestion, Inhalation
Acute Toxicity:
- Eyes: Causes eye irritation with tearing, redness, and impaired vision.
- Skin: Causes skin irritation, redness, and itching. May cause chemical burns.
- Ingestion: Harmful if swallowed. Corrosive to mucous membranes, esophagus and stomach.
- Inhalation: Respiratory irritant.
Chronic Effects: Avoid repeated exposure. May aggravate pre-existing medical conditions including eye, skin and respiratory disorders.
Carcinogenicity: Not listed as carcinogen by OSHA, NTP or IARC.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Hazardous Chemical</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Environmental Toxicity
Biodegradation: No information available.
Persistence: No information available.
Bioaccumulation: No information available.
Mobility: No information available.

SECTION 13: DISPOSAL CONSIDERATIONS
Waste Disposal: Recover or recycle if possible. Disposal should be in compliance with applicable federal, state, and local regulations. Do not dispose of in the environment, in sewage, and/or in drains.
Container: Drain contaminated container thoroughly. Do not reuse container.

SECTION 14: TRANSPORT INFORMATION
Transport in accordance with all federal, state, and local regulations.

DOT
Proper Name: Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric Acid)

12/9/2015
Hazard Class: 8
UN Number: UN3264
Packing Group: III
Special Provisions: 173.154 Exceptions for Class 8 (corrosive materials). (b) Limited quantities. (2) For corrosive materials in Packing Group III, inner packagings not over 1.3 gallons net capacity each for liquids packed in a strong outer packaging. 173.154 (b)(2).

SECTION 15: REGULATORY INFORMATION
US Federal Regulations
TSCA Status: All components of this product are listed or exempt from listing on TSCA inventory.
CERCLA Reportable Quantity: None

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Hazardous Chemical</th>
<th>California Proposition 65</th>
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<tbody>
<tr>
<td>None</td>
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Section 311/312 Hazard Category

<table>
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<tr>
<th>Acute Health Hazard:</th>
<th>7664-38-2</th>
<th>Phosphoric Acid</th>
<th>10%</th>
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<tbody>
<tr>
<td>Chronic Health Hazard:</td>
<td>No</td>
<td></td>
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<tr>
<td>Fire Hazard:</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sudden Release of Pressure:</td>
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<td></td>
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<tr>
<td>Reactive Hazard:</td>
<td>No</td>
<td></td>
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<tr>
<td>Section 313 Toxic Chemicals</td>
<td>No</td>
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SECTION 16: OTHER INFORMATION
Prepared by: Health and Safety Department
Contact Number: 1-877-866-9742
Issue Date: 12/9/2015
Revision Date: 12/9/2015
Revision Note: New Product
Version: 1

Disclaimer: The information provided in this Safety Data Sheet has been obtained from sources believed to be reliable. This information is offered for your information, consideration, and investigation. LD Carlson cannot anticipate all conditions under which this information and its product may be used. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. It is the user’s responsibility to assume liability for loss, injury, damage or expense due to improper use.

End of Safety Data Sheet