1. IDENTIFICATION

Product Identifier
Product Name Lime-X

Other Means of Identification
Product Code 345400

Recommended use of the Chemical and Restrictions on Use
Recommended Use Delimer concentrate. For industrial use.

Details of the Supplier of the Safety Data Sheet
Midlab, Inc.
140 Private Brand Way
Athens, TN 37303

Emergency Telephone Number
Company Phone Number Phone: 1-423-337-3180
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Green Physical State Liquid Odor Characteristic

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1 Sub-category B</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Hazards Not Otherwise Classified (HNOC)
May be harmful if swallowed.

Signal Word
Danger

Hazard Statements
Toxic if inhaled.
Causes severe skin burns and eye damage.

Precautionary Statements - Prevention
Use only outdoors or in a well-ventilated area.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center or doctor/physician.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. 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.
Immediately call a poison center or doctor/physician.
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

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

Other Hazards
Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>60-100</td>
</tr>
<tr>
<td>Phosphoric Acid</td>
<td>7664-38-2</td>
<td>15-40</td>
</tr>
<tr>
<td>Hydrochloric Acid</td>
<td>7647-01-0</td>
<td>1-5</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek immediate medical attention/advice. If possible, continue to flush eyes with running water until medical attention is received.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse.

Inhalation
Remove to fresh air. Get medical attention immediately.

Ingestion
Rinse mouth. Drink large amounts of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Most Important Symptoms and Effects

Symptoms
Corrosive to eyes. Corrosive and irritating to upper respiratory tract. Prolonged contact may even cause severe skin irritation or mild burn.

Indication of any Immediate Medical Attention and Special Treatment Needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray (fog). Carbon dioxide (CO2). Dry chemical. Foam.

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
None known.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES
Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions
Use personal protection recommended in Section 8.

Environmental Precautions
Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
Collect in a clean, dry waste container for disposal. Dispose of in accordance with federal, state and local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling
Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas. Avoid contact with skin and eyes.

Conditions for Safe Storage, including any Incompatibilities

Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up and out of reach of children. Keep from freezing.

Incompatible Materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid 7664-38-2</td>
<td>STEL: 3 mg/m³</td>
<td>TWA: 1 mg/m³</td>
<td>IDLH: 1000 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA: 1 mg/m³</td>
<td>(vacated) TWA: 1 mg/m³</td>
<td>TWA: 1 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 3 mg/m³</td>
<td>STEL: 3 mg/m³</td>
</tr>
<tr>
<td>Hydrochloric Acid 7647-01-0</td>
<td>Ceiling: 2 ppm</td>
<td>(vacated) Ceiling: 5 ppm</td>
<td>IDLH: 50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceiling: 7 mg/m³</td>
<td>Ceiling: 5 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceiling: 7 mg/m³</td>
<td>Ceiling: 7 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls

Engineering Controls
General ventilation sufficient.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face Protection
Splash goggles or safety glasses.

Skin and Body Protection
Rubber, Nitrile, PVC, or other chemically resistant skin protection to prevent contact.

Respiratory Protection
Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
<th>Odor</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
<td>Odor Threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>Color</td>
<td>Green</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Property | Values | Remarks • Method
---|---|---
pH | <1.0 |  
Melting Point/Freezing Point | ~ 0 °C / ~32 °F |  
Boiling Point/Boiling Range | ~ 100 °C / ~212 °F |  
Flash Point | Not applicable |  
Evaporation Rate | Not determined |  
Flammability (Solid, Gas) | n/a-liquid |  
Upper Flammability Limits | Not determined |  
Lower Flammability Limit | Not determined |  
Vapor Pressure | Not determined |  
Vapor Density | Not determined |  
Specific Gravity | 1.18 |  
Water Solubility | Completely soluble @ 25 °C (77 °F) |  
Solubility in other solvents | Not determined |  
Partition Coefficient | Not determined |  
Auto-ignition Temperature | Not determined |  
Decomposition Temperature | Not determined |  
Kinematic Viscosity | Not determined |  
Dynamic Viscosity | Not determined |  
Explosive Properties | Not determined |  
Oxidizing Properties | Not determined | 

### 10. STABILITY AND REACTIVITY

**Reactivity**  
Not reactive under normal conditions.

**Chemical Stability**  
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**  
None under normal processing.

**Conditions to Avoid**  
Keep out of reach of children. Keep from freezing.

**Incompatible Materials**  

**Hazardous Decomposition Products**  
When exposed to fire, produces normal products of combustion.

### 11. TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

**Product Information**

**Eye Contact**  
Causes severe eye damage.

**Skin Contact**  
Causes severe skin burns.

**Inhalation**  
Toxic if inhaled.

**Ingestion**  
May be harmful if swallowed.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid 7664-38-2</td>
<td>= 1530 mg/kg (Rat)</td>
<td>= 2730 mg/kg (Rabbit)</td>
<td>&gt; 850 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>Hydrochloric Acid 7647-01-0</td>
<td>= 700 mg/kg (Rat)</td>
<td>&gt; 5010 mg/kg (Rabbit)</td>
<td>= 3124 ppm (Rat) 1 h</td>
</tr>
</tbody>
</table>
Information on Physical, Chemical and Toxicological Effects

Symptoms

Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity

Not classifiable as a human carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid</td>
<td>7647-01-0</td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend

IARC (International Agency for Research on Cancer)
Group 3 IARC components are “not classifiable as human carcinogens”

Chronic Toxicity

Chronic exposure may cause liver, kidney and/or blood disorders.

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>7664-38-2</td>
<td>3 - 3.5: 96 h Gambusia affinis mg/L LC50</td>
<td>-</td>
<td>4.6: 12 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Hydrochloric Acid</td>
<td>7647-01-0</td>
<td>282: 96 h Gambusia affinis mg/L LC50 static</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>Corrosive</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION
Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
UN3264, Corrosive Liquid, Acidic, Inorganic, NOS (Containing Phosphoric Acid and Hydrochloric Acid), 8, PG II

IATA

IMDG
Marine Pollutant
This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories
Not determined

US Federal Regulations

CERCLA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>5000 lb</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
<tr>
<td>Hydrochloric Acid</td>
<td>5000 lb</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>7647-01-0</td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute Health Hazard       Yes
Chronic Health Hazard     Yes
Reactive Hazard           Yes

SARA 313

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid</td>
<td>7647-01-0</td>
<td>1-5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrochloric Acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7647-01-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

US State Regulations

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>State List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>MA, NJ, PA</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
</tr>
<tr>
<td>Hydrochloric Acid</td>
<td>MA, NJ, PA</td>
</tr>
<tr>
<td>7647-01-0</td>
<td></td>
</tr>
</tbody>
</table>

AZ – Arizona Ambient Air Quality Guidelines
CT – Connecticut Hazardous Air Pollutants
CA – California Director’s List of Hazardous Substances
CAP65 – California Prop 65
FL – Florida Substances List
ID – Idaho Non-Carcinogen Toxic Air Pollutants
IL – Illinois Toxic Air Contaminant- Carcinogenic
MA – Massachusetts Right to Know List
MI – Minnesota Hazardous Substances List
NJ – New Jersey Right to Know List
PA – Pennsylvania Right to Know List
RI – Rhode Island Hazardous Substances List
# 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Issue Date:** 08-Aug-2011  
**Revision Date:** 22-Jan-2014  
**Revision Note:** New format  Version 1.0

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

*Denotes changes from last version.

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**Keep Out of Reach of Children. For Industrial and Institutional Use Only.**

End of Safety Data Sheet