1. IDENTIFICATION

Product Identifier
Product Name
Lime Remover

Other Means of Identification
Product Code
271500

Recommended Use of the Chemical and Restrictions on Use
Recommended Use
Lime remover. 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 White
Physical State Powder
Odor None

Classification

<table>
<thead>
<tr>
<th>Skin Corrosion/Irritation</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2 Sub-category A</td>
</tr>
</tbody>
</table>

Signal Word
Warning

Hazard Statements
Causes skin irritation.
Causes serious eye irritation.

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves and 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
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation persists: Get medical advice/attention.
Specific treatment: Remove from exposure and treat symptoms.

Precautionary Statements - Storage
No other specific measures identified.

Precautionary Statements - Disposal
No other specific measures identified.

Hazards Not Otherwise Classified (HNOC)
None known.
Unknown Acute Toxicity
None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>77-92-9</td>
<td>60-100</td>
</tr>
<tr>
<td>Monosodium Phosphate</td>
<td>7558-80-7</td>
<td>10-30</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**
Exposure may cause irritation and redness. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

**Skin Contact**
Prolonged or repeated exposure may dry skin and cause irritation. Flush skin with water for 15 minutes. If irritation or rash persists, get medical attention.

**Inhalation**
If breathing becomes difficult, remove victim to fresh air. Call a physician if you feel unwell.

**Ingestion**
Rinse mouth and drink plenty of water. Do NOT induce vomiting unless directed to do so by a qualified medical personnel. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

**Most Important Symptoms and Effects**

**Symptoms**
Contact with eyes may cause irritation and redness. Prolonged or repeated contact may dry skin and cause irritation. Repeated contact may cause allergic reactions in very susceptible persons.

**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**
Oxides of sodium and phosphorus.

**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. Use a water rinse for final clean up.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling
Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid breathing dust or fume. Use only in well-ventilated areas. Avoid contact with eyes and skin. Handle in accordance with good industrial hygiene and safety practice.

Conditions for Safe Storage, Including Any Incompatibilities

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

Incompatible Materials
None known.

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>Citric Acid 77-92-9</td>
<td>5mg/m³</td>
<td>5mg/m³</td>
<td>-</td>
</tr>
<tr>
<td>Monosodium Phosphate 7758-80-7</td>
<td>TWA: 10mg/m³ (inha 5mg/m³ (respirable particles)</td>
<td>TWA: 15 mg/m³ (Total dust)</td>
<td>TWA: 5 mg/m³ (respirable fraction)</td>
</tr>
</tbody>
</table>

Appropriate Engineering Controls

Engineering Controls
General ventilation sufficient.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection
Eye protection should be worn when splashing may occur.

Skin and Body Protection
Wear suitable gloves when handling this product.

Respiratory Protection
No protective equipment is needed under normal use conditions.

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>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
<td>Odor</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>pH (1%)</td>
<td>2.5-3.0</td>
<td>None</td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td>(1% solution)</td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>None (not flammable)</td>
<td>Tag Open Cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Not flammable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>
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.

**Hazardous Polymerization**
Hazardous polymerization does not occur.

**Conditions to Avoid**
Keep out of reach of children. Avoid concentrated acids, bases, heavy metal salts, flammable materials, combustible materials, and moisture.

**Incompatible Materials**
Oxidizing agents, bases, reducing agents, and nitrates

**Hazardous Decomposition Products**
Thermal decomposition may result in the formation of oxides of carbon, sodium and phosphorus.

11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Product Information**

**Eye Contact**
Causes eye irritation.

**Skin Contact**
May cause skin irritation or rash.

**Inhalation**
Avoid breathing dust.

**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>Citric Acid 77-92-9</td>
<td>&gt; 5000mg/kg (Rat)</td>
<td>&gt; 2000mg/kg (Rat)</td>
<td>-</td>
</tr>
<tr>
<td>Monosodium Phosphate 7758-80-7</td>
<td>= 8290 mg/kg (Rat)</td>
<td>-</td>
<td>-</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
This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical Measures of Toxicity
Not determined

Unknown Acute Toxicity
None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

<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>Citric Acid 77-92-9</td>
<td>-</td>
<td>440-706mg/L (Goldfish 96hr)</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.

14. TRANSPORT INFORMATION

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

DOT
Not regulated

IATA
Not regulated

IMDG
Not regulated

15. REGULATORY INFORMATION

International Inventories
Not determined

US Federal Regulations

CERCLA
None listed.

SARA 311/312 Hazard Categories
Acute Health Hazard
Yes
SARA 313
Not determined

**US State Regulations**

**U.S. State Right-to-Know Regulations**
The following ingredients appear on various state right to know lists and/or California’s Proposition 65 list:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>State List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>NJ, PA</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 Prop65
FL- Florida Substances List
ID- Idaho Non-Carcinogen Toxic Air Pollutants

**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></td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Issue Date: 08-Aug-2011
Revision Date: 27-Feb-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.

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

*Denotes changes from last version.

End of Safety Data Sheet