MATERIAL SAFETY DATA SHEET FROM STEARNS PACKAGING CORPORATION

IDENTITY (As Used On Label and List)

D-Lime-X

FORMULA ID NUMBER: AL-0100 C00-0205

MSDS FILE NAME: "D-LIME_X"

Degree of Hazard

EPA REG #: None

4 = Extreme Flammability = 0

USDA ACCEPTANCE DATE AND

3 = High Health = 2

CATEGORY CODE: 12/30/75; A3

2 = Moderate Reactivity = 0

0 = Slight Special Hazard = None

0 = Insignificant

SHIPPING INFORMATION

CHEMICAL FORMULA: HOCH2COOH

DOT Shipping Name: Cleaning Compound, NOI, Liquid, Item 45580, Sub. J, Class 55

CHEMICAL FAMILY: Organic Acid

DOT Shipping Number Hazard Label Hazard Class

Meets DOT Minimum Quantity Exemption: N/A

For Transportation Emergency Involving Hazardous Materials Contact

Meets DOT 1,000# Exemption: N/A

CHEM-TEL 1 - ( 800 ) 255 - 3924

SARA Section 313 Title III Notification Required: No

SARA Section 313 Title III Chemical in Product:

CAS # of Chemical: N/A

Weight % of Chemical: N/A

If SARA notification is required, this MSDS MUST BE accompanied by an attached Section 313 notification (under EPA's Section 3 of the Emergency Planning and Community Right-to-Know Act). Any copying or redistribution of this MSDS must include the Section 313 notification. If an attached Section 313 notification is NOT attached, please contact your supplier or Stearns Packaging Corporation for a copy. This notification is necessary if this product contains "toxic" chemicals on the SARA inventory.

SECTION I

Manufacturer's Name: STEARNS PACKAGING CORPORATION

Date of Form's Last Update: 02/20/91

Manufacturer's Phone Number for Information: 1 - ( 608 ) 246 - 5150

Manufacturer's FAX Number for Information and Leaving Overnight Messages: 1 - ( 608 ) 246 - 5147

Manufacturer's Address ( Number, Street, City, State, and Zip Code)

4200 Sycamore Ave.

P.O. Box 3216 (Use Zip Code 53704)

Madison Wisconsin (WI) 53714

Signature of Preparer (Optional)

Peter Teska

Manager Research and Development
Regulatory Affairs Officer
Stearns Laboratories of Stearns Packaging Corporation
### SECTION II-HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Components (Specific Chemical Identity; Common Name(s))</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>OTHER LIMITS RECOMMENDED (OPTIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydroxyacetic Acid 79-14-1</td>
<td>Corrosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonylphenol Ethoxylate 68412-54-4</td>
<td>Irritant</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 (DuPont)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION III-PHYSICAL/CHEMICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>234°F</td>
</tr>
<tr>
<td>Specific Gravity (Water=1)</td>
<td>1.066</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Complete</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Amber color liquid, mild burnt sugar odor.</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>2.7</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>0.15</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate=1)</td>
<td>N/A</td>
</tr>
<tr>
<td>pH (Concentrate)</td>
<td>1.86</td>
</tr>
<tr>
<td>pH (1% Solution)</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>

### SECTION IV-FIRE AND EXPLOSION HAZARD DATA

- **Flash Point (Method Used):** Non-combustible
- **Extinguishing Media:** Not Applicable
- **Special Fire Fighting Procedures:** Use full protective clothing and self-contained breathing apparatus.
- **Unusual Fire and Explosion Hazards:** Unknown

### SECTION V-REACTIVITY DATA

- **Stability:** Unstable: No  
  Stable: Yes  
  Conditions to Avoid: None
- **Incompatibility (Materials to Avoid):** Metals, oxidizing materials, cyanides or sulfides.
- **Hazardous Decomposition or Byproducts:** Hydrogen, nitrogen oxides, hydrogen cyanide or hydrogen sulfide gases upon reaction with metals, nitric acid, cyanides or sulfides respectively.
- **Hazardous Polymerization:** May Occur: No  
  Will Not Occur: Yes  
  Conditions to Avoid: None Known
SECTION VI—HEALTH HAZARD DATA

Routes of Entry:
- Inhalation: No
- Skin Absorption: Yes
- Ingestion: Yes
- Eye Contact: Yes

Health Hazards (Acute and Chronic):
- Irritation of exposed tissues, especially eyes and mucous membranes.
- Chronic effects of exposure: Kidney and liver damage from inhalation have been reported in experimental animals.

Carcinogenicity:
- NTP? No
- IARC Monographs? No
- OSHA Regulated? No

Signs and Symptoms of Exposure:
- Inhalation: Vapors and mists may irritate or corrode mucous membranes with upper and lower respiratory irritation.
- Eye Contact: Liquid and mist may irritate the eyes, causing discomfort, tearing or blurring vision. Prolonged contact may lead to severe irritation from corneal or conjunctival ulceration.
- Skin Contact: Brief contact may cause irritation or rash. Prolonged contact can cause skin burns and ulceration.
- Swallowing: Mists and liquid are corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes nausea, vomiting and collapse. Swallowing large quantities may cause death.

Medical Conditions Generally Aggravated by Exposure: No Data Available.

Emergency and First Aid Procedures:
- Eyes: Flush with copious amounts of water for at least 15 minutes. If irritation persists, obtain medical attention.
- Skin: Wash with warm soapy water for 15 minutes. If irritation persists, obtain medical attention.
- Inhalation: Remove from exposure. Obtain medical attention.
- Ingestion: Rinse mouth with water. Give copious amounts of water or milk to dilute. Do NOT induce vomiting.

Note to Physician: No specific antidote. Use supportive care. Treatment should be based on judgement of the physician in response to reactions of the patient.

SECTION VII—PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Wear acid-resistant slippers and complete protective equipment including rubber gloves and rubber boots and chemical goggles and face shield. For small spills or drips, mop or wipe up and dispose of in approved containers. For large spills, contain by digging with soil or other absorbent material and carefully neutralize with caustic ash or lime. If soda ash is used, provide adequate ventilation to dissipate carbon dioxide gas. Keep non-neutralized material of sewers, store drains, surface waters and soils.

Waste Disposal Method: Waste disposal must be done in accordance with all local, city or municipality, county, state, and federal regulations. Consult your state department of natural resources or the EPA for specific questions not answerable through other sources. Wastewater should never enter a fresh water body without treatment.

Precautions to be taken in Handling and Storage: Store in a cool, dry place. Store away from all other chemicals. Keep container tightly closed when not in use. Do not use pressure to empty container. Wash thoroughly after handling. Do not get in eyes, on skin or on clothing.

Other Precautions: Containers, even those that are empty, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. Store in dry, well ventilated place above 50°F freezing point.
SECTION VIII-OTHER REGULATORY INFORMATION

California Safe Drinking Water and Toxic Enforcement Act, Proposition 65.

Ethylene Oxide 75-21-8 <10 ppm

SECTION IX-CONTROL MEASURES

Respirator Protection (Specify Type): NIOSH/MSHA respirator with full faceplate if sensitivity to vapors is noted by user of product. In general, respirators are not needed if the product is used in a well-ventilated area. However, use of a respirator may be a good common sense approach to working with products where dusts and mists are known to cause irritation of the eyes and/or mucous membranes.

Ventilation:
Local exhaust: To localize emissions at point of use
Mechanical (General): Recommended
Special: N/A
Other: N/A

Protective Gloves: Neoprene, rubber, or other chemical resistant gloves.

Eye Protection: Splash goggles, or safety glasses if splashing is not a concern.

Other Protective Clothing or Equipment: Long sleeved shirt, trousers with full coverage. Chemical resistant safety suit if desired.

Work/Hygienic Practices: As Good Hygiene Dictates

All information, recommendations and data contained herein concerning this product are based upon information available at the time of writing from recognized technical sources.

Stearns Packaging Corporation makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Stearns Packaging Corporation as to the effects of such use, the results to be obtained or the safety and toxicity of this product nor does Stearns Packaging Corporation assume any liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Stearns Packaging Corporation does not recommend blending this product with any other chemicals. Additional product literature may be available upon request.