1. IDENTIFICATION

Product Identifier: OPI LIME/SCALE REMOVER CONCENTRATE (SKU #77016)
Application or recommended use: Concentrated hard surface delimer/descaler
Restrictions on use: Do not use in any fashion not specified on the product label.
Supplier: OPI Correctional Industries
1221 McKinley Ave.
Columbus, Ohio 43222 USA
Telephone: 800.237.3454  Emergency phone: 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification: Classification of this mixture in accordance with paragraph (d) of §1910.1200.
Skin Corrosion/Irritation - Category 1
Eye Damage/Irritation - Category 1

Label Elements:
- Symbol: 
- Signal word: DANGER
- Hazard statements: Causes severe skin burns and serious eye damage.
- Precautionary statements:
  - Do not breathe fume/mist/vapors/spray.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
  - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
  - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - 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.
  - Store locked up. Dispose of contents/container to an approved disposal facility.

Other Hazards: Harmful if swallowed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Organic acid salt solution, blended with detergents, organic acids and auxiliary agents.
Hazardous ingredients: The exact percentage of composition has been withheld as a trade secret.
- 5 - 10% Lactic acid  CAS 50-21-5, EINECS/ELINCS 200-18-0
- 5 - 10% Urea Hydrochloride  CAS 506-89-8, EINECS/ELINCS N/A
Other ingredients (> 1%):
- > 85% Water  CAS 7732-18-5, EINECS/ELINCS 231-791-2

4. FIRST-AID MEASURES

Symptoms: Causes irritation or burning sensation. Causes severe skin burns and serious eye damage.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
Inhalation: Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.
Skin Contact: Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration. Probable mucosal damage may contraindicate the use of gastric lavage.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Not applicable. Product is not a fire hazard.

Unsuitable Extinguishing Media: High pressure water jet.

Specific hazards in case of fire: None known.

Special Fire Fighting Precautions: Prevent human exposure to fire, smoke, fumes or products of combustion. Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Depending on the extent of release, consider the need for emergency responders with adequate personal protective equipment for clean up, need for evacuation or restriction of access to spill area.

Personal Precautions: Provide adequate ventilation. Do not eat, drink or smoke during clean up. If necessary, use self-contained respirator, or filtered mask. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.

Environmental Precautions: Prevent spills from entering storm sewers/drains or contact with soil.

Clean up Methods: Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Do not use on any surface that can be damaged by acid materials. Do not breathe mist/vapors. Wash hands, face and any skin contact thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.

Conditions for Safe Storage: Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal.

Store locked up in tightly closed, container in a cool (10˚ - 30˚C), dry area.

Incompatibility: Chlorine bleach, alkali.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with occupational exposure limits: None

Engineering Controls: Proper ventilation in accordance with good industrial hygiene should be provided.

Personal Protective Equipment

Respiratory: Respiratory protection is not necessary under normal conditions of use.

Gloves: Water impervious gloves (latex or neoprene rubber) recommended.

Eye Protection: Chemical resistant goggles recommended

Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Blue</td>
</tr>
<tr>
<td>Odor</td>
<td>Fresh</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>212°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>32°F</td>
</tr>
<tr>
<td>pH (Neat)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>pH (RTU)</td>
<td>2.5 - 4.5</td>
</tr>
<tr>
<td>Relative Density</td>
<td>1.030</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Similar to water</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 200°F (ASTM D3278)</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability Limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility (Water)</td>
<td>Complete</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Water thin</td>
</tr>
<tr>
<td>% VOC</td>
<td>&lt; 0.5 (Excluding exempt material)</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity: No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected.

Incompatible materials: Oxidizers.

Chemical stability: This product is stable at ambient temperatures and atmospheric pressures.

Conditions to avoid: Temperatures above 50°C or below 10°C.

Hazardous decomposition products: None known.
11. TOXICOLOGICAL INFORMATION

**Acute Toxicity:** Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
<th>Classification (A.0.4.1(c)) Basis (A.1.3.6.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt; 2000mg/kg</td>
<td>Not applicable Ingredient literature (Additive formula)</td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt; 2000mg/kg</td>
<td>Not applicable Ingredient literature (Additive formula)</td>
</tr>
<tr>
<td>Inhalation</td>
<td>&gt; 20 mg/L</td>
<td>Not applicable Ingredient literature (Additive formula)</td>
</tr>
<tr>
<td>Eye Damage/Irritation</td>
<td>Corrosion</td>
<td>Category 1 Ingredient literature</td>
</tr>
<tr>
<td>Skin Damage/Irritation</td>
<td>Corrosion</td>
<td>Category 1C Ingredient literature</td>
</tr>
</tbody>
</table>

**Summary:** Skin and eye contact are most likely routes of exposure. Exposure causes skin burns and serious eye damage.

**Subchronic/Chronic Toxicity:**

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
<th>Classification</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Sensitization</td>
<td>Not a sensitizer</td>
<td>Not applicable</td>
<td>Ingredient literature.</td>
</tr>
</tbody>
</table>

**Summary:** Repeated or prolonged contact causes skin burns and eye damage.

**Carcinogens** - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA

**Other data** - No other toxicological information is available for this mixture.

12. ECOLOGICAL INFORMATION

This material has not been tested for acute environmental effects.

**Persistence and degradability:** Material is not persistent. Organic components in this product are readily biodegradable.

**Bio-accumulative potential:** No evidence to suggest bio-accumulation will occur.

**Mobility:** Accidental spillage may lead to penetration of soil and groundwater.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling, reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

14. TRANSPORT INFORMATION

**Proper Shipping Name:** UN3264 Corrosive liquid, acidic, inorganic, n.o.s. (Urea hydrochloride)

**RQ - N/A**  
**Shipping emergency phone:** 800-424-9300

**Transport hazard class:** 8  
**Hazard Label:** Corrosive (When shipped as a Limited Quantity, labeling is not required.)

**Packing Group:** III  
**Emergency Guide No.:** 154  
**Marine Pollutant:** No

15. REGULATORY INFORMATION

**Inventory status:** All components are listed on TSCA (US EPA).

**OSHA Hazard Communication Standard:** This product is classified as a "Hazardous Chemical".

**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312**

- **Immediate (Acute) Health Hazard:** Yes
- **Delayed (Chronic) Health Hazard:** No
- **Fire Hazard:** No
- **Reactive Hazard:** No
- **Sudden Release of Pressure Hazard:** No

**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313**

*Chemicals marked with an asterisk in “3. Composition/Information on Ingredients” are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

**Pennsylvania/New Jersey/Massachusetts Right to Know**

See “3. Composition/Information on Ingredients” for hazardous and top five ingredients present in concentration greater than 1%.

**California Proposition 65:** This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS RATING</th>
<th>NFPA RATING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>PPE</td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

Date issued: 25.09.2014                  
Revision: Version 002 30.04.15           
#77016 Added HMIS/NFPA to 16. OTHER INFORMATION

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. Prepared by: R&D