

MATERIAL SAFETY DATA SHEET

Trade Name: Lime Scale Remover #8761

Prepared: August 15th, 2001

Revised: March 5, 2004

Section I - Source Information

Manufacturer's Name: Michigan State Industries, Inc.
 Address: Ryan Correctional Facility
 Emergency Phone: (313) 368-3200 x51412
 (800) 222-1222 Poison Control
 Technical Information: (313) 368-3200 x51412
 Chemical Name: Acid/Detergent

Section II - Hazardous Ingredients/Identify Information

Hazardous Components	CAS No.	OSHA PEL*	ACGIH TLV*
Phosphoric Acid		7664-38-2	1 mg/m ³
Hydrochloric Acid		7647-01-0	5ppm, 7 mg/m ³

*Exposure limits expressed as eight-hour time-weighted average concentrations in parts of contaminant per million parts of air by volume(ppm)."Other Limits" are recommended by the National Institute for Occupational Safety and Health (NIOSH) and are time-weighted over ten hours unless otherwise specified.

Section III - Physical/Chemical Characteristics

<u>Boiling Point:</u>	>200 F.	<u>Specific Gravity:</u>	1.215
<u>Vapor Pressure:</u>	Like Water	<u>Vapor Density:</u>	0.7
<u>Evaporation Rate: (Ethyl Ether = 1):</u>	1	<u>Solubility in Water:</u>	100%
<u>Appearance and Color:</u>	Yellow, Acid Odor	<u>pH:</u>	1.0

Section IV- Fire and Explosion Hazard Data:

Flash Point: >200 °F Flammable Limits: LEL: N/A UEL: N/A

Extinguishing Media: Dry chemical, carbon dioxide, foam, water

Special Fire Fighting Procedures: Fire fighters should wear self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: None Expected

NFPA 704

Health -	3	HAZARDS 4 - Extreme 3 - Severe 2 - Moderate 1 - Slight 0 - None
Fire -	0	
Reactivity-	1	

Section V - Reactivity Data:

Stability: STABLE

Incompatibility(Conditions to avoid): Strong caustics and most metals. Potential violent reaction with sodium tetrahydroborate. DO NOT mix with solutions containing bleach or ammonia. DO NOT mix with any other product.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Heating Phosphoric Acid to decomposition yields toxic Phosphorus Pentoxide Fumes.

Section VI - Health Hazard Data:

Routes of Entry: Eye and skin contact, inhalation and ingestion.

Carcinogenicity: NTP: No IARC: No OSHA: No

Signs and Symptoms of Exposure: Corrosive, causes severe burns to skin and eyes.

Target Organs: Eyes, skin, respiratory system

Acute: Moderately toxic by ingestion and skin contact, Irritant to eyes, skin, upper respiratory system and mucous membranes, and a systemic irritant by inhalation. Burns skin and causes dermatitis.

Chronic:

Medical Conditions Generally Aggravated by Exposure:

Emergency and First Aid Procedures:

Eye: If this product contacts the eyes, immediately wash the eyes with large amounts of water for at least 15 minutes, lifting the lower and upper lids. Get medical attention immediately.

Swallow: If this product has been swallowed, get medical attention immediately.

Skin: When skin becomes contaminated wash immediately.

Breathing: If a person breathes large amounts of this product, move the exposed person to fresh air at once. If breathing has stopped, perform mouth-to-mouth resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case of Material Release or Spill: Contain, neutralize and absorb spilled material, dispose of properly. Large spill may be collected using vacuum equipment, dispose of unusable material properly.

Waste Disposal Method: This product does exhibit the hazardous characteristic of Corrosive (D002) as listed in 40CFR 261, Subpart C. It is not listed in the federal hazardous waste regulations 40CFR 261.33, paragraphs (e) or (f), i.e. chemical products that are considered hazardous if they become wastes. State or local hazardous waste regulations may apply if different from federal.

Precautions to be Taken in Handling and Storing: Protect containers from physical damage, store away from heat, separate from alkalis. Avoid skin and eye contact, do not mix this product with any other product, avoid breathing vapors. Store in a cool, dry place, wash thoroughly after handling. Follow normal housekeeping procedures.

Other Precautions: Do not mix with any other products.

Section VIII - Control Measures:

Respiratory Protection: Normally not needed. Supplied air or self contained breathing apparatus if above regulatory levels

Ventilation: Mechanical ventilation to reduce concentration to below regulatory levels

Protective Gloves: Wear chemical resistant gloves when handling this product

Eye Protection: Wear appropriate glasses, goggles or face shield to prevent eye contact.

Other Protective Clothing or Equipment: Wear appropriate personal protective clothing to prevent skin contact. Protective or work clothing that becomes wet should immediately be removed. Change work clothing daily.

Work/Hygienic Practices: Eyewash fountains and drench showers should be provided in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection.

Section IX-Additional Information:

DOT Shipping Name: Phosphoric Acid Solution, 8, UN1805, PG III

Hazard Class: Corrosive Material

This product contains the following compounds which are subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR 372:

<u>Constituent</u>	<u>CAS #</u>	<u>Concentration</u>
Phosphoric Acid	7664-38-2	>19%

This notification of reporting requirements, cannot be removed from this MSDS and the copying and redistribution of this document must include this notice.

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originated with Michigan State Industries, Inc. or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.