

SAFETY DATA SHEET

Revision Date: November 8, 2017

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SECTION 1: IDENTIFICATION

Product Identifier

Product Name: HD Lime Remover

Recommended Use of the Chemical and Restrictions on Use

Recommended Use: Cleaner for removing and controlling lime deposits

Details of the Supplier of the Safety Data Sheet

Supplier Address: Luseaux Laboratories, Inc. Luseaux Laboratories Inc.
4625 N Santa Fe Drive or 16816 Gramercy Place
Kingman, AZ 86401 Gardena, CA 90247

Emergency Telephone Number

Company Phone Number: Arizona Location: 928-692-0192
California Location: 310-324-1555

Emergency Telephone: CHEMTREC: 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

Appearance: Green clear liquid

Physical State: Liquid

Odor: Mild acid odor

Classification

Serious eye damage/eye irritation	Category 1
Skin corrosion/irritation	Category 1A



Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage.

Precautionary Statements – Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling.

Precautionary Statements – Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

IF ON SKIN: 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.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
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Chemical Name	CAS No	Weight %
Phosphoric Acid	7664-38-2	Not identified*

*The specific percentages are not identified due to "Trade Secret" status. In emergency situation, further information may be obtained by calling the emergency information number listed above. Reference 29 CFR 1910.1200

SECTION 4: FIRST AID MEASURES

First Aid Measures**Eye Contact**

Immediately flush eyes with running water for at least 20 minutes. Seek immediate medical attention, preferably with an ophthalmologist. If the physician is not immediately available, eye irrigation should be continued for an additional 20 minutes. If it is necessary to transport the patient to a physician and the eye needs to be bandaged, use dry sterile cloth pad and cover both eyes.

Skin Contact

For minor skin contact, avoid spreading material on unaffected skin. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse.

Inhalation

Administer oxygen if breathing is difficult. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Give artificial respiration if victim is not breathing. Move victim to fresh air.

Ingestion

If swallowed, give 2-3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention immediately if ingested. Do not use mouth-to-mouth method if victim ingested the substance. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Persons attending the victim should avoid direct contact with heavily contaminated clothing and vomitus. Wear impervious gloves while decontaminating skin and hair.

Most Important Symptoms and Effects, both Acute and Delayed**Symptoms**

Eye contact is corrosive and can cause permanent damage to the cornea, blindness. Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis. **Skin contact** causes severe skin burns and eye damage. Repeated or prolonged exposure to corrosive materials will cause dermatitis. **Inhalation** may cause corrosive burns and irreversible damage. Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough. **Ingestion** causes corrosion, burns to mouth and esophagus, abdominal pain, chest pain, nausea, vomiting, diarrhea, seizures. Aspiration of the swallowed or vomited product can cause severe pulmonary complications. Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Other Information Call 911 or emergency medical service. Ensure that medical personnel are aware of the material involved and take precautions to protect themselves. Keep victim warm and quiet.

SECTION 5: FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: None known

Specific Hazards Arising from the Chemical

Not combustible. Under fire conditions, toxic, corrosive fumes are emitted – oxides of phosphorus. Flammable hydrogen gas will be liberated if material contacts active metal.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSNA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions, Protective Equipment and Emergency Procedures**

Personal Precautions: Ventilate enclosed areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental Precautions: Prevent material from waterways, sewers, basements or confined areas. Runoff from fire control or dilution water may cause pollution.

Methods and Material for Containment and Cleaning Up

Methods for Containment: Exercise caution during neutralization as considerable heat may be generated. Neutralize spill area with soda ash, sodium bicarbonate or lime. Flush neutralized spill with copious amounts of water.

Methods for Cleaning Up: Keep unauthorized personnel away. Dike spill using absorbent or impervious materials such as earth, sand or clay. Dike or retain dilution water or water from firefighting for later disposal.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe Handling**

Advice on Safe Handling: Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest. Handle and open container with care. Use only with adequate ventilation. Use caution when combining with water. DO NOT add water to corrosive liquid. ALWAYS add corrosive liquid to water while stirring to prevent release of heat, steam and fumes. This product reacts violently with bases liberating heat and causing spattering.

Conditions for Safe Storage, Including and Incompatibilities

Storage Conditions: Store in cool/low-temperature, well-ventilated, dry place. Store locked up. Keep away from incompatible materials. Ventilate enclosed areas.

Incompatible Materials: Fluorine, strong oxidizing agents, strong reducing agents, bases, metals, sulfur trioxide, phosphorous pentoxide.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric Acid 7664-38-2	TWA: 1 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³

Appropriate Engineering Controls

Engineering Controls Apply technical measures to comply with occupational exposure limits. Good general ventilation should be used and should be matched to conditions.

Individual Protections Measures, such as Personal Protective Equipment

Eye/Face Protection: Wear face shield and eye protection.

Skin and Body Protection: Wear protective clothing as warranted.

Hands: Wear protective gloves selected with regard to both durability and well as permeation resistance.

Respiratory: Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

General Hygiene Considerations: Do not get in eyes or on skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES
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Information and Basic Physical and Chemical Properties

Physical State: Liquid

Odor: Mild acid odor

Appearance: liquid

Color: Clear green liquid

Odor Threshold: Not determined

Property	Value	Property	Value
pH – 1% solution	1.0 to 2.0	Melting/freezing point	Not determined
Boiling point	> 212°F	Flash point	Not determined
Evaporation rate	Not determined	Flammability	Not flammable
Flammability limits/ air	Not determined	Vapor pressure	Not determined
Vapor density	Not determined	Specific gravity	1.14
Water solubility	Complete	Solubility in other solvents	Not determined
Partition coefficient	Not determined	Auto-ignition temp	Not determined
Decomposition temp	Not determined	Kinematic viscosity	Not determined
Dynamic Viscosity	Not determined	Explosive properties	Not determined
Oxidizing properties	Not determined	Bulk Density	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions

Chemical Stability

Stable

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Incompatible materials

Incompatible Materials

Fluorine, strong oxidizing agents, strong reducing agents, bases, metals, sulfur trioxide, phosphorous pentoxide.

Hazardous Decomposition Products

Oxides of phosphorous

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

- Eye Contact** Corrosive. Can cause permanent date to the cornea, blindness.
- Skin Contact** Causes severe skin burns and eye damage.
- Inhalation** May cause corrosive burns – irreversible damage.
- Ingestion** Causes corrosion, burns to mouth and esophagus.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric Acid 7664-38-2	= 1.25 mg/kg (Rat)	= 595 mg/kg (Rabbit)	= 25.5 mg/m ³ (Rat)

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.

Numerical Measures of Toxicity-Product

Not determined

SECTION 12: ECOLOGICAL INFORMATION

Not determined

SECTION 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.

SECTION 14: TRANSPORT INFORMATION

DOT NA 1760, COMPOUND, CLEANING, LIQUID (Contains Phosphoric Acid) 8, PG III,

SECTION 15: REGULATORY INFORMATION

International Inventories

Legend:

Not determined

US Federal Regulations

Section 313 of Sara Title III

Phosphoric Acid, CAS No 7664-38-2 15% to 75% 5000 lb final RQ; 2270 kg final RQ

US State Regulations

Calif. Prop. 65 Warning: This product may contain a trace amount of one or more of the chemicals on the California list of known carcinogens or substances known to cause birth defects or other reproductive harm. These are not added to the product but occur naturally in the raw materials or processing equipment.

SECTION 16: OTHER INFORMATION

<u>HMIS</u>	Health Hazards	Flammability	Reactivity	Personal Protection
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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information is designed only as 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.

End of Safety Data Sheet