

SAFETY DATA SHEET

COMPANY IDENTITY: HD Chem
 PRODUCT IDENTITY: Lime Descaler

SDS DATE: 07/18/2017

This Safety Data Sheet conforms to ANSI Z400.5, and to the format requirements and the International Chemical Safety Cards of the Global Harmonizing System.

THIS SDS COMPLIES WITH CFR 1910.1200 (HAZARD COMMUNICATIONS STANDARD)

IMPORTANT: Read this SDS before handling & disposing of this product.

Pass this information on to employees, customers, & users of this product.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTITY: Lime Descaler
 PART NUMBER: C-L01
 COMPANY IDENTITY: HD Chem
 COMPANY ADDRESS: 707 W. 16th St. Long Beach, CA 90813
 COMPANY PHONE: 1-888-443-2436
 EMERGENCY PHONE: 1-888-443-2436

SECTION 2. HAZARDS IDENTIFICATION

DANGER!!



EXPOSURE PREVENTION:

HAZARD STATEMENTS:

H100s = General, H200s = Physical, H300 = Health, H400s = Environmental

- H314 Causes severe skin burns and eye damage.
- H302+H332 Harmful if swallowed. Harmful if inhaled.
- H335 May cause respiratory irritation.

PRECAUTIONARY STATEMENTS:

P100s = General, P200s = Prevention, P300s = Response, P400s = Storage, P500s = Disposal

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do – Continue rinsing.
- P309+311 If exposed or you feel unwell: Call a POISON CENTER or doctor/physician.
- P403 Store in a well-ventilated place.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS#	WT %
Phosphoric Acid	7664-38-2	20-30
2-Hydroxy-1,2,3,- Propanetricarboxylic Acid	77-92-9	<10

Trace components: Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, reproductive toxins, respiratory tract mutagens, and sensitizers). None of the trace ingredients contribute significant Additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents, and Canadian Hazardous Materials Identification System Standard (CPR 4).

SECTION 4. FIRST AID MEASURES

EYE CONTACT:

If this product enters the eyes, open eyes while under gently running water. Use sufficient force to open eyelids. Roll eyes to expose more surface. Minimum flushing is for 15 minutes. Seek immediate medical attention.

SKIN CONTACT:

If the product contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove contaminated clothing, taking care not to contaminate eyes. If skin becomes irritated and irritation persists, medical attention may be necessary. Wash contaminated clothing before reuse, discard contaminated shoes.

INHALATION:

After high vapor exposure, remove to fresh air. If it is suspected that the fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest, breathing is difficult, give oxygen. If breathing has stopped, trained personnel should immediately begin artificial respiration. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If the heart has stopped, trained personnel should immediately begin cardiopulmonary resuscitation (CPR). Seek immediate medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

SWALLOWING:

If swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, give two glasses of water to drink. DO NOT INDUCE VOMITING. Never induce vomiting or give liquids to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis Should be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (such as: Gastric lavage after endotracheal intubation).

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of the label and SDS to physician or health professional with victim.

SECTION 5. FIRE FIGHTING MEASURES

FIRE & EXPLOSIONS PREVENTIVE MEASURES:

Not considered to be a fire hazard. Contact with most metals causes formation of flammable and explosive hydrogen gas.

EXTINGUISHING MEDIA:

Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool. If water is used, use in abundance to control heat and acid build up.

SPECIAL FIRE FIGHTING PROCEDURES:

Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used. Do not enter confined fire-space without full bunker gear. (Helmet with face shield, bunker coats, gloves & rubber boots). Use NIOSH approved positive-pressure self-contained breathing apparatus.

UNUSUAL EXPLOSION AND FIRE PROCEDURES:

Noncombustible.

Reacts with most metals producing hydrogen which is extremely flammable and may explode. Applying to hot surfaces requires special precautions. Closed containers may explode if exposed to extreme heat.

SECTION 6. ACCIDENTAL RELEASE MEASURES**SPILL AND LEAK RESPONSE AND ENVIRONMENTAL PRECAUTIONS:**

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

PERSONAL PROTECTIVE EQUIPMENT:

The proper protective equipment for incidental releases (such as: 1 Litter of the product released in a well-ventilated area), use impermeable gloves (triple-gloves, rubber gloves and nitrile gloves, over latex gloves), goggles, face shield, and appropriate body protection. In the event of a large release, use impermeable gloves, specific for the material handled, chemically resistant suit and boots, and hard hat. Self-Contained Breathing Apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select NIOSH/MSHA approved based on actual or potential airborne concentrations in accordance with latest OSHA and/or ANSI recommendations.

ENVIRONMENTAL PRECAUTIONS:

Stop spill at source. Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material. Close or cap valves and/or block or plug hole in leaking container and transfer to another container, keep from entering storm sewers and ditches which lead to waterways, and if necessary, call the local fire or police department for immediate emergency assistance.

CONTAINMENT AND CLEAN-UP MEASURES:

Absorb spilled liquid with poly pads or other suitable absorbent materials. If necessary, neutralize using suitable buffering material, (acid with soda ash or base with phosphoric acid), and test area with litmus paper to confirm neutralization. Clean up with non-combustible absorbent (such as: sand, soil, and so on). Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13- Disposal Considerations).

SECTION 7. HANDLING AND STORAGE**HANDLING:**

Use only with adequate ventilation. Do not get in eyes, on skin or clothing. Wear OSHA Standard full face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.

STORAGE:

Keep in a tightly closed container. Protect from physical damage. Store in a cool dry ventilated area away from sources, of heat, moisture, incompatibilities, and direct sunlight.

NONBULK: CONTAINERS:

Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in a secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see section 10, Stability and Reactivity). Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Empty containers should be handle with care. Never store food, feed. Or drinking water in containers which held this product.

BULK CONTAINERS:

All tanks and pipelines which contain this material must be labeled. Perform routine maintenance on tanks or pipelines which contain this product. Report all leaks immediately to the proper personnel.

TANK CAR SHIPMENTS:

Tank cars carrying this product should be loaded and unloaded in strict accordance with tank-car manufacturers Recommendations and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protective Equipment). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended, at all times. Tank cars must be verified to be correct for receiving this product and be properly prepared, prior to starting the transfer operations. Hoses must be verified to be in the correct positions, before starting transfer operations. A sample (if required) must be taken and verified prior to starting transfer operations. All lines must be blown-down and purged before disconnecting them from the tank car vessel.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:

Follow practices indicated in section 6 (Accidental Release Measures). Make sure certain application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilations is provided. Collect all rinsates and dispose of according to applicable Federal, State, Provincial, or local procedures.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

MATERIAL	CAS#	EINECS#	TWA (OSHA)	TLV (ACGIH)
Phosphoric Acid	7664-38-2	231-633-2	1 mg/m ³	1 mg/m ³
Citric Acid Anhydrous	77-92-9	201-069-1	None Known	None Known

MATERIAL	CAS#	EIENECS#	CEILING	STEL (OSHA/ACGIH)	HAP
Phosphoric Acid	7664-38-2	231-633-2	None Known	3 mg/m ³	No

Each component showing yes under HAP is an EPA Hazardous Air Pollutant.

RESPIRATORY EXPOSURE CONTROLS:

A respiratory protective program that meets OSHA CFR 1910.134 and ANSI Z86.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

VENTILATION:

LOCAL EXHAUST: Recommended MECHANICAL (General): Recommended

SPECIAL: None OTHER: None

Please refer to ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

PERSONAL PROTECTION:

Wear OSHA Standard full face shield. Consult Safety Equipment Supplier. Wear goggles, face shield, gloves, apron & footwear impervious to material. Wash clothing before reuse.

WORK & HYGIENIC PRACTICES:

Provide readily accessible eye wash stations & safety showers. Wash at the end of each work shift & before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Destroy contaminated leather articles. Launder or discard contaminated clothing.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES:

APPEARANCE:	Water clear liquid
ODOR:	Odorless
ODOR THRESHOLD:	Not Available
pH (1%):	1-2
MELTING POINT/FREEZING POINT:	N/A
BOILING RANGE (IBP, 50%, Dry Point):	N/A
FLASH POINT (TEST METHOD):	Not Applicable
EVAPORATION RATE (n-BUTYL ACETATE=1):	N/A
FLAMMABILITY CLASSIFICATION:	Non-Combustible
LOWER FLAMMABLE LIMIT IN AIR (% by vol):	Not Applicable
UPPER FLAMMABLE LIMIT IN AIR (% by vol):	Not Available
VAPOR PRESSURE (mm of Hg)@20 C:	N/A
VAPOR DENSITY (air = 1):	N/A
GRAVITY @ 68/68F / 20/20C:	
SPECIFIC GRAVITY (Water = 1):	1.16-1.18
POUNDS/GALLON:	9.75
WATER SOLUBILITY:	Complete
PARTITION COEFFICIENT (n-Octane/Water):	Not Available
AUTO IGNITION TEMPERATURE:	Not Applicable
DECOMPOSITION TEMPERAURE:	Not Available

SECTION 10. STABILITY & REACTIVITY**STABILITY:**

Stable under most conditions, but reacts with most metals producing hydrogen gas.

CONDITIONS TO AVOID:

Isolate from oxidizers, alkalis, extreme heat, and open flame.

MATERIALS TO AVOID:

The substance is a strong acid, reacts violently with bases and is corrosive. Reacts violently with strong oxidants, forming toxic gas (phosphorus oxides). Reacts violently with strong bases, causing fire and explosion hazard.

HAZARDOUS DECOMPOSITION PRODUCTS:

Phosphorus oxides may form when heated to decomposition.

HAZARDOUS POLYMERIZATION:

Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION**ACUTE HAZARDS****EYE & SKIN CONTACT:**

Severe burns to skin, defatting, dermatitis.

Severe burns to eyes, redness, tearing, and blurred vision.

Liquid can cause severe skin & eye burns. Wash thoroughly after handling.

INHALATION:

Severe respiratory tract irritation may occur. Vapor harmful.

The applicable occupational exposure limit value should not be exceeded during any part of working exposure.

SWALLOWING:

Harmful or fatal if swallowed.

SUBCHRONIC HAZARDS/CONDITIONS AGGRAVATED**CONDITIONS AGGRAVATED:**

Persons with severe skin, liver or kidney problems should avoid use.

CHRONIC HAZARDS**CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:**

This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date

Greater or equal to 0.1%.

IRRITANCY OF PRODUCT: This product is irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a sensitizer.

MUTAGENICITY: This product is not reported to produce mutagenic effects in humans.

EMBRYOTOXICITY: This product is not reported to produce embryotoxic effects in humans.

TERATOGENICITY: This product is not reported to produce teratogenic effects in humans.

REPRODUCTIVE TOXICITY: This product is not reported to cause reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to developing embryo (such as: within the eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

MAMMALIAN TOXICITY INFORMATION

TOXICITY DATA: Toxicology information for components > 1% concentration is given below:

PHOSPHORIC ACID

ORAL: Rat LD50 1530 mg/kg

SKIN: Rabbit LD50 =2740 mg/kg

INHALATION: Rat LC50= >850 mg/m³/1H

LD50 – Dose that is lethal to 50% of a given species by a given route of exposure.

LC50 – Air concentration that is lethal to 50% of a given species in a given period of time.

LDLO –Lowest lethal dose in a given species by a given route of exposure.

SECTION 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

EFFECT OF MATERIAL ON AQUATIC LIFE:

PHOSPHORIC ACID:

LC50 (mosquito fish): 138 mg/L 96 hours

MOBILITY IN SOIL:

This material is mobile liquid.

DEGRADABILITY:

This product is partially biodegradable.

ACCUMULATION:

This product does not accumulate or biomagnify in the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Processing, use or contamination may change the waste management options. Recycle / dispose of observing national, regional, state, provincial and local health, safety & pollution laws. If in doubt, contact appropriate agencies.

SECTION 14. TRANSPORT INFORMATION

SECTION 302(RQ) 5000 OF THIS PRODUCT IS IN 1 CONTAINER, IT EXCEEDS THE. "RQ" OF PHOSPHORIC ACID. RQ MUST BE PUT BEFORE THE DOT SHIPPING NAME.

DOT/TDG SHIP NAME: UN1760, Corrosive Liquid, N.O.S. (Contains Phosphoric Acid), 8, PG, III

DRUM LABEL: (CORROSIVE)

IATA / ICAO: UN1760, Corrosive Liquid, N.O.S. (Contains Phosphoric Acid), 8, PG-III

IMO / IMDG: UN1760, Corrosive Liquid, N.O.S. (Contains Phosphoric Acid), 8, PG-III

EMERGENCY RESPONSE GUIDEBOOK NUMBER 157



SECTION 15. REGULATORY INFORMATION**EPA REGULATIONS:**

SARA SECTION 311/312 HAZARDS: Acute Health

ALL components of this product are on the TSCA list.

SARA Title III Section 313 Supplier Notification

This product contains the indicated < * > toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372.

This information must be included in all MSDSs that are copied and distributed for this material.

SARA TITLE III INGREDIENTS	CAS#	EINECS#	WT%	(REG.SECTION)	RQ (LBS)
Phosphoric Acid	7664-38-2	231-633-2	20-25	(302,311,312,313)	5000

Any release equal to or exceeding the RQ must be reported to the National Response Center (800-424-8802) and appropriate state and local regulatory agencies as described in 40 CFR 302.6 and 40 CFR 355.40 respectively.

Failure to report may result in substantial civil and criminal penalties. State & local regulations may be more restrictive than federal regulations.

STATE REGULATIONS:**CALIFORNIA SAFE DRINKING WATER & TOXIC ENFORCEMENT ACT (PROPOSITION 65):**

This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

INTERNATIONAL REGULATIONS:

The components of this product are listed on the chemical inventories of the following countries: Australia (AICS), Canada (DSL,NDSL), China (IECSC), Europe (EINECS,ELINCS), Japan (METI/CSCL, MHLW/ISHL), South Korea (KECI), New Zealand (NZIOC), Philippines (PICCS), Switzerland (SWISS), Taiwan (NECSI), USA (TSCA).

CANADA: WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

D2B: Irritating to skin / eyes.

E: Corrosive Material.

SECTION 16. OTHER INFORMATION**HAZARD RATINGS:**

HEALTH (NFPA): 2, HEALTH (HMIS): 2, FLAMMABILITY: 0, PHYSICAL HAZARD: 0

(Personal Protection Rating to be supplied by user based on use conditions.)

This information is intended solely for the use of individuals trained in the NFPA & HMIS hazard rating system.

EMPLOYEE TRAINING:

See Section 2 for Risk & Safety Statements. Employees should be made aware of all hazards of this material (as stated in this SDS) before handling it.

NOTICE

All information, recommendations, and suggestions appearing herein concerning this product are based upon data obtained from the manufacturer and/or recognized technical sources; however, HD Chem makes no warranty, representation or guaranty 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 the product. Additional product literature may be available upon request. Since actual use by others is beyond our control, no warranty, express or implied is made by HD Chem as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does HD Chem assume any liability arising out of use by others of this product.