Safety Data Sheet

Issue Date: 14-Jun-2013 **Revision Date:** 11-Feb-2015 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name Heavy Duty LimeLifter!

Other means of identification

SDS # EMS-008

Product Code Product Numbers: EMS-5252, EMS-5254

UN/ID No UN1760

Recommended use of the chemical and restrictions on use

Recommended Use Delimer.

Details of the supplier of the safety data sheet

Supplier Address

EMS Detergent Services
390 Herky Street, Suite 4W
North Liberty, IA 52317

Emergency Telephone Number

Company Phone Number (319) 665-2216

Emergency Telephone (24 hr) Chemtrec 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Blue/purple liquid **Physical State** Liquid **Odor** Bitter

Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Immediately call a poison center or doctor/physician
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
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Immediately call a poison center or doctor/physician
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a poison center or doctor/physician
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Phosphoric Acid	7664-38-2	15-25

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediately call a poison center or doctor/physician. Do not apply any medicated agents except on the advice from a physician.

Skin Contact
Immediately remove contaminated clothing and flush affected areas with plenty of water for at least 15 minutes. Wash contaminated clothing before reuse, discard footwear, which cannot be decontaminated. Get medical attention immediately. Do not apply any medicated agents except on the advice from a physician.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. If breathing is irregular or stopped, administer artificial respiration. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Call a physician or poison control center immediately.

Ingestion	Wash mouth out with water provided the person is fully conscious. WARNING: never give anything by mouth to an unconscious person. Move victim to fresh air. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, lean the victim forward and keep head below hips to prevent breathing in vomitus and aspiration of liquid into the lungs. Keep airway clear and give more water. Seek medical attention immediately. If victim is not breathing and convulsing take to hospital immediately.

Most important symptoms and effects

Symptoms	Causes severe skin burns and eye damage.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray may be used to keep fire exposed containers cool.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Reacts with metals to liberate flammable hydrogen gas. Formation of flammable gases with aldehydes, cyanides, mercaptins and sulfides. Mixtures with nitromethane are explosive.

Hazardous Combustion Products Flammable gases, toxic fumes and violent exothermic reaction.

Protective equipment and precautions for firefighters
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Evacuate non-essential personnel from area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Environmental Precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.
Methods for Clean-Up	Clean up with absorbent, non-combustible material. Flush spill area with water, avoiding sewers, water courses, basements or confined areas. Ventilate closed spaces before entering. Do NOT reuse any product that has been spilled, as it could be contaminated or lessen the effectiveness of the product for its intended uses. Do not reuse container after spill.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Do not breathe vapors or spray mist. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat or drink while handling this material. Use non-sparking tools.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from heat, sparks, flame. Do not handle or store near any sources of ignition. Keep in properly labeled containers. Keep out of the reach of children. Keep separate from food items. Store locked up. Protect from direct sunlight.

Incompatible Materials Oxidizing agents, combustible materials, metals and alkalis. Extremely corrosive in the presence of copper, stainless steel (304), stainless steel (316). Highly corrosive in the presence of aluminum. Non-corrosive in the presence of glass. Do NOT mix with Bleach or ammonia or solutions containing either bleach or ammonia.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phosphoric Acid 7664-38-2	STEL: 3 mg/m^3 TWA: 1 mg/m^3	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3 (vacated) STEL: 3 mg/m^3	IDLH: 1000 mg/m^3 TWA: 1 mg/m^3 STEL: 3 mg/m^3

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear chemical goggles and face shield.

Skin and Body Protection Wear suitable protective clothing. Acid resistant clothing to prevent skin contact. Rubber or acid resistant gloves.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2).

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash at the end of each work shift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Blue/purple liquid	**Odor**	Bitter
Color	Blue/purple	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	Not determined	
Melting Point/Freezing Point	21 °C / 69.8 °F	
Boiling Point/Boiling Range	158 °C / 316.4 °F	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	3.4	(Air=1)
Specific Gravity	1.685	(Water = 1)
Water Solubility	Easily soluble in hot water. Soluble in cold water.	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
See Sec. 7 Handling & Storage.

Incompatible Materials
Oxidizing agents, combustible materials, metals and alkalis. Extremely corrosive in the presence of copper, stainless steel (304), stainless steel (316). Highly corrosive in the presence of aluminum. Non-corrosive in the presence of glass. Do NOT mix with Bleach or ammonia or solutions containing either bleach or ammonia.

Hazardous Decomposition Products
Flammable gases, toxic fumes and violent exothermic reaction.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not ingest.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric Acid 7664-38-2	= 1530 mg/kg (Rat)	= 2730 mg/kg (Rabbit)	> 850 mg/m^3 (Rat) 1 h

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 Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations. EMS Detergent Services Representatives pick up empty containers upon arrival if requested or seen during service. If not; dispose of in a permitted waste management facility following all local, state and federal regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations. Since emptied containers retain product residues, all hazard precautions given in the data sheet must be observed before disposal of empty containers can occur.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Phosphoric Acid 7664-38-2	Corrosive

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquids, n.o.s. (phosphoric acid)
Hazard Class	8
Packing Group	II

IATA

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s. (Phosphoric acid)
Hazard Class	8
Packing Group	II

IMDG

UN/ID No	UN1760
Proper Shipping Name	Corrosive liquid, n.o.s. (Phosphoric acid)
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Phosphoric Acid	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Phosphoric Acid 7664-38-2	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Not determined

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phosphoric Acid	5000 lb			X

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Phosphoric Acid 7664-38-2	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	2	1	0	None
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

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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 its publication. The information given is designed only as a 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