



SAFETY DATA SHEET

Issuing Date 26-Aug-2014

Revision Date 20-Jun-2016

Revision Number 3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name Lime Remover Plus

Other means of identification

Product Code 6622

UN-Number UN3264

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lime Scale Remover

Uses advised against No information available

Supplier's details

Supplier Address
Sunburst Chemicals, Inc.
220 W. 86th St.
Bloomington, MN 55420
TEL: 952-884-3144

Emergency Telephone Number 1-866-303-6943

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

PRODUCT AS SOLD

Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/Irritation	Category 1 Subcategory 1B
Serious Eye Damage/Eye Irritation	Category 1

PRODUCT AT USE DILUTION

Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/Irritation	Category 1 Subcategory 1B
Serious Eye Damage/Eye Irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

PRODUT AS SOLD

Signal Word Danger

Hazard Statements

- Harmful if inhaled
- Causes severe skin burns and eye damage
- Harmful if ingested.



Appearance Green

Physical State Liquid

Odor Odorless

Precautionary Statements

Prevention

- 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

General Advice

- Immediately call a POISON CENTER or doctor/physician

Eyes

- 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.

Skin

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Ingestion

- IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage

- Store locked up

Disposal

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

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Toxic to aquatic life. Harmful to aquatic life with long lasting effects

PRODUCT AT USE DILUTION

Signal Word

Danger

Hazard Statements

- Harmful if inhaled
- Causes severe skin burns and eye damage
- Harmful if ingested.

Emergency Overview



Appearance Colorless/ light green

Physical State Liquid

Odor Odorless

Precautionary Statements

Prevention

- 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

General Advice

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Disposal

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3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT AS SOLD

Chemical Name	CAS-No	Weight %	Trade secret
Phosphoric acid	7664-38-2	10 - 30	*
Nitric acid	7697-37-2	1 - 10	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

PRODUCT AT USE DILUTION			
Chemical Name	CAS-No	Weight %	Trade secret
Phosphoric acid	7664-38-2	0.1 - 30	*
Nitric acid	7697-37-2	0.01 - 10	*

4. FIRST AID MEASURES

PRODUCT AS SOLD

Description of necessary first-aid measures

General Advice	Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Seek immediate medical attention/advice.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Burning sensation, sour taste

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

PRODUCT AT USE DILUTION	
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Seek immediate medical attention/advice.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most Important Symptoms/Effects	Burning sensation, sour taste

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water. Carbon dioxide (CO₂). Dry chemical. Keep containers and surroundings cool with water spray.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical

Sealed containers may rupture when heated. Spills produce extremely slippery surfaces.

Hazardous Combustion Products No information available.

Explosion Data

Sensitivity to Mechanical Impact None

Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters

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

6. ACCIDENTAL RELEASE MEASURES

PRODUCT AS SOLD

Personal precautions, protective equipment and emergency procedures

Personal Precautions If spilled, take caution, as material can cause surfaces to become very slippery. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions

Environmental Precautions Avoid release to the environment. Collect spillage. See Section 12 for additional Ecological Information Dispose of contents/container to an approved waste disposal plant. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

PRODUCT AT USE DILUTION	
Personal Precautions	If spilled, take caution, as material can cause surfaces to become very slippery. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Ensure adequate ventilation. Use personal protective equipment.
Environmental Precautions	Avoid release to the environment. Collect spillage. See Section 12 for additional Ecological Information Dispose of contents/container to an approved waste disposal plant. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.
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Methods for Cleaning Up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

PRODUCT AS SOLD

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed. Keep container closed when not in use. Keep out of the reach of children.

Incompatible Products Chlorine-based bleaching agents.

PRODUCT AT USE DILUTION	
Handling	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.
Storage	Keep container tightly closed. Keep container closed when not in use. Keep out of the reach of children.
Incompatible Products	Chlorine-based bleaching agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

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
Nitric acid 7697-37-2	STEL: 4 ppm TWA: 2 ppm	STEL: 10 mg/m ³ TWA: 2 ppm STEL: 4 ppm TWA: 5 mg/m ³	TWA: 2 ppm STEL: 4 ppm

Appropriate engineering controls

Engineering Measures Eyewash stations

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles.
Skin and Body Protection Rubber gloves. Rubber apron.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Green
Odor	Odorless	Odor Threshold	No information available

<u>Property</u>	<u>Values for Product as Sold</u>	<u>Values for Product at Use Dilution</u>
pH , Use Solution	0.5 – 1.5	0.5 -2.0
Melting Point/Range	None	
Boiling Point/Boiling Range	100 °C / 212 °F	212 °F
Flash Point	None.	
Evaporation rate	No data available	Physical State – Liquid
Flammability (solid, gas)	No data available	Odor – None
Flammability Limits in Air		Appearance - Colorless/light green
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	
Vapor Density	No data available	
Relative Density	No data available	
Specific Gravity	No data available	
Water Solubility	Complete	
Solubility in other solvents	No data available	
Partition coefficient: n-octanol/water	No data available	
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	No data available	
Flammable Properties	Not flammable	
Explosive Properties	No data available	
Oxidizing Properties	No data available	
<u>Other information</u>		
VOC Content (%)	0%	

10. STABILITY AND REACTIVITY

Reactivity
No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Acidic material, do not mix with highly alkaline products or solution

Conditions to avoid
Mixing with chlorinated products.

Incompatible materials
Chlorine-based bleaching agents.

Hazardous decomposition products
Chlorine gas if mixed with materials containing chlorine bleach.

11. TOXICOLOGICAL INFORMATION

PRODUCT AS SOLD
Information on likely routes of exposure
Product Information

Inhalation	Avoid breathing vapors or mists. May be harmful by inhalation.
Eye Contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	Skin contact with corrosive substances can cause skin burns.
Ingestion	Harmful if swallowed. Gastrointestinal discomfort.

PRODUCT AT USE DILUTION	
Inhalation	Avoid breathing vapors or mists. May be harmful by inhalation.
Eye Contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin Contact	Skin contact with corrosive substances can cause skin burns.
Ingestion	Harmful if swallowed. Gastrointestinal discomfort.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phosphoric acid	= 1530 mg/kg (Rat)	= 2730 mg/kg (Rat)	= 850 mg/m3 (Rat) 1h
Nitric acid	-	-	= 130 mg/m3 (Rat) 4 h = 7 mg/L (Rat) 1 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no carcinogenic ingredients.

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity • - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral No information available.
LD50 Dermal No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Phosphoric acid		LC50: 3 - 3.5 mg/L Gambusia affinis 96 h		EC50 12 h: = 4.6 mg/L (Daphnia magna)
Nitric acid	-	LC50 96 h: = 72 mg/L (Gambusia affinis)	-	-

Persistence and Degradability No information available.
Bioaccumulation No information available.

Other Adverse Effects No information available.

13. DISPOSAL CONSIDERATIONS

PRODUCT AS SOLD

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations
Contaminated Packaging Dispose of in accordance with federal, state, and local regulations.

PRODUCT AT USE DILUTION	
Waste Disposal Methods	Dispose of in accordance with federal, state, and local regulations
Contaminated Packaging	Dispose of in accordance with federal, state, and local regulations.

Chemical Name	California Hazardous Waste

Phosphoric acid	Corrosive
Nitric acid	Corrosive

14. TRANSPORT INFORMATION

DOT

UN-Number	UN3264
Proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Hazard Class	8
Packing Group	II
Reportable Quantity (RQ)	Phosphoric acid: RQ= 500 lbs.
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid), 8, II, RQ
Emergency Response Guide Number	154

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSC	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSC - Canadian Domestic Substances Lists / Non Domestic Substances Lists

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Nitric acid	7697-37-2	1 - 10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phosphoric acid	5000 lb.	-	-	X
Nitric acid	1000 lb.	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Phosphoric acid	5000 lb.	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Nitric acid	1000 lb.	-	RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. 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	Illinois	Minnesota
Phosphoric acid	X	X	X		X
Nitric acid	X	X	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	Health Hazard 3	Flammability 0	Instability 0	Physical and Chemical Hazards -
HMS	Health Hazard 3	Flammability 0	Physical Hazard 0	Personal Protection C

Prepared By Sunburst Chemicals
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Bloomington, MN 55420
952-884-3144

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Revision Note Update

General Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet