



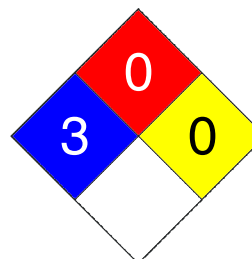
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Lime Out Stain Remover
CAS # Mixture
Product use Cleaner
Manufacturer Iron Out dba Summit Brands
 7201 Engle Road
 Fort Wayne, IN 46804-5875 US
 Phone: 260-483-2519
 Emergency Phone: 1-800-424-9300 (CHEMTREC)

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	0
Personal Protection	B



2. Hazards Identification

Emergency overview DANGER -- CORROSIVE

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes Causes chemical burns. May cause blindness.

Skin Causes chemical burns.

Inhalation May cause respiratory tract irritation.

Ingestion Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs Eyes. Respiratory system. Skin.

Chronic effects Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms The product causes burns of eyes, skin and mucous membranes.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Citric acid	77-92-9	3 - 7
Hydrogen chloride	7647-01-0	3 - 7
Lactic Acid	79-33-4	3 - 7

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.

Inhalation If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

Ingestion Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

General advice If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Not flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Dry chemical. Foam. Carbon dioxide. Fog.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Hydrogen chloride.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits	
Ingredient(s)	Exposure Limits
Citric acid	ACGIH-TLV TWA: 10 mg/m ³ OSHA-PEL TWA: 10 mg/m ³
Hydrogen chloride	ACGIH-TLV Ceiling: 2 ppm OSHA-PEL Ceiling: 5 ppm
Lactic Acid	ACGIH-TLV Not established OSHA-PEL Not established
Engineering controls	Use only under good ventilation conditions or with respiratory protection.
Personal protective equipment	
Eye / face protection	Wear chemical goggles.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection	As required by employer code. Rubber apron recommended.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Clear.
Color	Blue
Form	Liquid
Odor	Not available
Odor threshold	Not available
Physical state	Liquid
pH	0.46
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Flash point	None
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.037 (H ₂ O = 1)
Octanol/water coefficient	Not available
Auto-ignition temperature	Not available
Viscosity	72.8 cPs
Percent volatile	Not available

10. Stability and Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with bleach or any other chemical. Reacts violently with alkaline material. This product may react with reducing agents.
Incompatible materials	Caustics. Oxidizers. Reducing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Hydrogen chloride.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Citric acid	Not available
Hydrogen chloride	935 ppm mouse; 3124 mg/l/4h rat
Lactic Acid	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Citric acid	5040 mg/kg mouse; 3000 mg/kg rat
Hydrogen chloride	900 mg/kg rabbit; 700 mg/kg rat
Lactic Acid	1810 mg/kg guinea pig; 3543 mg/kg rat; 4875 mg/kg mouse

Effects of acute exposure

Eye	Causes chemical burns. May cause blindness.
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Skin	Causes chemical burns.
Inhalation	May cause respiratory tract irritation.
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitization	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Chronic effects	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Carcinogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
ACGIH - Threshold Limit Values - Carcinogens	
Hydrogen chloride	7647-01-0 A4 - Not Classifiable as a Human Carcinogen
IARC - Group 3 (Not Classifiable)	
Hydrogen chloride	7647-01-0 Monograph 54 [1992]
Mutagenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Reproductive effects	Not classified or listed by IARC, NTP, OSHA and ACGIH.
Teratogenicity	Not classified or listed by IARC, NTP, OSHA and ACGIH.

12. Ecological Information

Ecotoxicity	Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.	
Ecotoxicity - Freshwater Algae Data		
Lactic Acid	79-33-4	70 Hr EC50 Selenastrum capricornutum: 3.5 mg/L
Ecotoxicity - Freshwater Fish Species Data		
Citric acid	77-92-9	96 Hr LC50 Lepomis macrochirus: 1516 mg/L [static]
Hydrogen chloride	7647-01-0	48 Hr LC50 Lepomis macrochirus: 3.6 mg/L; 96 Hr LC50 Gambusia affinis: 282 mg/L
Lactic Acid	79-33-4	96 Hr LC50 Brachydanio rerio: 320 mg/L [semi-static]
Ecotoxicity - Microtox Data		
Citric acid	77-92-9	15 Min EC50 Photobacterium phosphoreum: 14 mg/L
Ecotoxicity - Water Flea Data		
Citric acid	77-92-9	72 Hr EC50 Daphnia magna: 120 mg/L
Lactic Acid	79-33-4	48 Hr EC50 Daphnia magna: 240 mg/L
Environmental effects	Not available	
Aquatic toxicity	Not available	
Persistence / degradability	Not available	
Bioaccumulation / accumulation	Not available	
Partition coefficient	Not available	
Mobility in environmental media	Not available	
Chemical fate information	Not available	
Other adverse effects	Not available	

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Review federal, provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	Corrosive liquids, n.o.s. (1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-)
Hazard class	8
UN number	UN1760
Packing group	II
Additional information:	
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
ERG number	154



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	CORROSIVE LIQUID, N.O.S. (1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-)
Hazard class	8
UN number	UN1760
Packing group	II
Additional information:	
Special provisions	16



IATA/ICAO (Air)

Not regulated as dangerous goods.

IMDG (Marine Transport)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Citric acid	77-92-9	1 %
Hydrogen chloride	7647-01-0	1 %

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Hydrogen chloride	7647-01-0	5000 Lb final RQ; 2270 kg final RQ
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

Hydrogen chloride	7647-01-0	5000 Lb EPCRA RQ (gas only)
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

Hydrogen chloride	7647-01-0	500 Lb TPQ (gas only)
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U.S. - CERCLA/SARA - Section 313 - Emission Reporting

Hydrogen chloride	7647-01-0	1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
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U.S. - CWA (Clean Water Act) - Hazardous Substances

Hydrogen chloride	7647-01-0	Present
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Hydrogen chloride: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

WHMIS status Controlled

WHMIS classification Class E - Corrosive Material

WHMIS labeling



State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Hydrogen chloride 7647-01-0 Present

U.S. - Illinois - Toxic Air Contaminants

Hydrogen chloride 7647-01-0 Present (aerosol)

U.S. - Louisiana - Reportable Quantity List for Pollutants

Hydrogen chloride 7647-01-0 5000 Lb RQ (applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period); 1000 lb RQ (applies to unauthorized emissions based on total mass emitted into the atmosphere)

U.S. - Massachusetts - Right To Know List

Hydrogen chloride 7647-01-0 Extraordinarily hazardous

U.S. - Minnesota - Hazardous Substance List

Hydrogen chloride 7647-01-0 Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Hydrogen chloride 7647-01-0 sn 1012

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Hydrogen chloride 7647-01-0 5000 Lb RQ (air); 100 lb RQ (land/water)

U.S. - North Carolina - Control of Toxic Air Pollutants

Hydrogen chloride 7647-01-0 0.7 mg/m3 (acute irritants)

U.S. - Ohio - Extremely Hazardous Substances - Threshold Quantities

Hydrogen chloride 7647-01-0 500 Lb TQ (gas only)

U.S. - Pennsylvania - RTK (Right to Know) List

Hydrogen chloride 7647-01-0 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Hydrogen chloride 7647-01-0 Toxic; Flammable

Inventory name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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