SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	**Lime OUT**
Other means of identification	Not available
Recommended use	Calcium and Lime Scale Stain Remover
Recommended restrictions	None known.
Manufacturer information	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)
Supplier	See above.

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	

Label elements

Signal word	Danger
Hazard statement	May be corrosive to metals. Causes severe skin burns and eye damage.
Precautionary statement	
Prevention	Keep only in original packaging. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	Absorb spillage to prevent material-damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Specific treatment (see information on this label). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Store in a corrosion resistant container with a resistant inner liner. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Hydrochloric acid		7647-01-0	8
Citric Acid		77-92-9	5.5

Chemical name	Common name and synonyms	CAS number	%
Lactic Acid		79-33-4	5.5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

Skin contact
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor. Specific treatment (see information on this label).

Eye contact
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/doctor.

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

Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media
Dry chemical. Foam. Carbon dioxide. Fog.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Firefighters should wear full protective clothing including self- contained breathing apparatus.

Fire-fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

Hazardous combustion products
May include and are not limited to: Oxides of carbon. Hydrogen chloride.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep out of low areas. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Should not be released into the environment.

Large Spills: Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water .

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Prevent entry into waterways, sewers, basements or confined areas.

7. Handling and Storage

Precautions for safe handling Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash thoroughly after handling. Use good industrial hygiene practices in handling this material. Avoid breathing vapors or mists of this product. Avoid contact with eyes, skin and clothing.

Conditions for safe storage, including any incompatibilities Store locked up. Store in corrosive resistant container with a resistant inner liner. Store in a closed container away from incompatible materials. Keep only in the original container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	3 mg/m3
		2 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	7.5 mg/m3
		5 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrochloric acid (CAS 7647-01-0)	Ceiling	7 mg/m3
		5 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Canada - Manitoba OELs: Skin designation

2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5) Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5)	Can be absorbed through the skin.

Appropriate engineering controls Use only under good ventilation conditions or with respiratory protection.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear chemical goggles.

Skin protection

Hand protection Rubber gloves. Confirm with a reputable supplier first.

Other Wear appropriate chemical resistant clothing. Rubber apron recommended.

Respiratory protection Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

Thermal hazards Not available.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Wash hands before breaks and immediately after handling the product. Use good industrial hygiene practices in handling this material. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance	Clear
Physical state	Liquid.
Form	Liquid
Color	Blue
Odor	Lime.
Odor threshold	Not available.
pH	< 1
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.058
Partition coefficient (n-octanol/water)	Not available.
Flash point	None
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	200 - 300 cPs

10. Stability and Reactivity

Reactivity	Reacts vigorously with alkaline material. This product may react with reducing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.

Conditions to avoid	Do not mix with other chemicals. Do not mix with bleach or any other chemical.
Incompatible materials	Caustics. Oxidizers. Bases. Reducing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Hydrogen chloride.

11. Toxicological Information

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

Information on likely routes of exposure

Ingestion	Causes digestive tract burns.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Citric Acid (CAS 77-92-9)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours, ECHA
Inhalation		
LC50	Not available	
Oral		
LD50	Mouse	5400 mg/kg, ECHA
		5040 mg/kg, HSDB
	Rat	11700 mg/kg, ECHA
		6730 mg/kg, HSDB
Hydrochloric acid (CAS 7647-01-0)		
Acute		
Dermal		
LD50	Mouse	1449 mg/kg
Inhalation		
LC50	Mouse	13745 ppm, 5 Minutes, ECHA
		2644 ppm, 5 Minutes, ECHA
		1108 ppm, 1 Hours
		16.5 mg/L, 5 Minutes, ECHA
		3.2 mg/L, 5 Minutes, ECHA
	Rat	40989 ppm, 5 Minutes, ECHA
		4701 ppm, 5 Minutes, ECHA
		2810 ppm, 1 Hours, EIGA
		1405 ppm, 4 Hours, EIGA
		45.6 mg/L, 5 Minutes, ECHA
		8.3 mg/L, 5 Minutes, ECHA
Oral		
LD50	Rabbit	900 mg/kg, Sax's Dangerous Properties of Industrial Materials
Lactic Acid (CAS 79-33-4)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg

Components	Species	Test Results
Inhalation		
LC50	Rat	7.9 mg/L, 4 Hours
Oral		
LD50	Guinea pig	1810 mg/kg
	Mouse	4875 mg/kg
	Rat	3543 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye damage.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

ACGIH sensitization

2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5) Dermal sensitization

Canada - Alberta OELs: Irritant

Acetic acid, phenylmethyl ester (CAS 140-11-4) Irritant

Hydrochloric acid (CAS 7647-01-0) Irritant

Canada - Manitoba OELs Hazard: Dermal sensitization

2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5) Dermal sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity See below.

Canada - Manitoba OELs: carcinogenicity

2-PROPANOL (CAS 67-63-0) Not classifiable as a human carcinogen.

BENZYL ACETATE (CAS 140-11-4) Not classifiable as a human carcinogen.

CITRAL, INHALABLE FRACTION AND VAPOR (CAS 5392-40-5) Not classifiable as a human carcinogen.

HYDROGEN CHLORIDE (CAS 7647-01-0) Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Acetic acid, phenylmethyl ester (CAS 140-11-4) Volume 40, Supplement 7, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.

Hydrochloric acid (CAS 7647-01-0) Volume 54 - 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Teratogenicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

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. See below

Ecotoxicological data

Components		Species	Test Results
Citric Acid (CAS 77-92-9)			
Acute			
Crustacea	EC50	Daphnia magna	120 mg/L, 72 hr
Aquatic			
Acute			
Fish	LC50	Bluegill (Lepomis macrochirus)	1516 mg/L, 96 hr
Hydrochloric acid (CAS 7647-01-0)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	282 mg/L, 96 hours
Lactic Acid (CAS 79-33-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	180 - 320 mg/L, 48 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions Review federal, state/provincial, and local government requirements prior to disposal. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue.

U.S. Department of Transportation (DOT)

Basic shipping requirements:

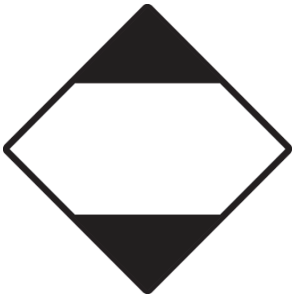
UN number	UN1760
Proper shipping name	Corrosive liquids, n.o.s.
Technical name	HYDROGEN CHLORIDE
Hazard class	Limited Quantity - US
Packing group	II
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

UN number	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S.
Technical name	HYDROGEN CHLORIDE
Hazard class	Limited Quantity - Canada
Packing group	II
Special provisions	16

DOT; TDG



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number

Isopropanol (CAS 67-63-0)	1 TONNES

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Hydrochloric acid (CAS 7647-01-0)	Class B

WHMIS 2015 Exemptions Not applicable

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

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hydrochloric acid (CAS 7647-01-0)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US EPCRA Section 304 Extremely Haz. Subs. & CERCLA Haz. Subs.: Section 304 EHS reportable quantity

Hydrochloric acid (CAS 7647-01-0)	5000 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Hydrochloric acid	7647-01-0	8

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Hydrochloric acid (CAS 7647-01-0)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrochloric acid (CAS 7647-01-0)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

US state regulations

US - California Hazardous Substances (Director's): Listed substance

Acetic acid, phenylmethyl ester (CAS 140-11-4)	Listed.
Hydrochloric acid (CAS 7647-01-0)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - Illinois Chemical Safety Act: Listed substance

Hydrochloric acid (CAS 7647-01-0)
Isopropanol (CAS 67-63-0)

US - Louisiana Spill Reporting: Listed substance

Hydrochloric acid (CAS 7647-01-0)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - Minnesota Haz Subs: Listed substance

Acetic acid, phenylmethyl ester (CAS 140-11-4)	Listed.
Hydrochloric acid (CAS 7647-01-0)	Listed.
Isopropanol (CAS 67-63-0)	Listed.

US - New Jersey RTK - Substances: Listed substance

Acetic acid, phenylmethyl ester (CAS 140-11-4)
Hydrochloric acid (CAS 7647-01-0)
Isopropanol (CAS 67-63-0)

US - North Carolina Toxic Air Pollutants: Listed substance

Hydrochloric acid (CAS 7647-01-0)

US - Texas Effects Screening Levels: Listed substance

2,6-Octadienal, 3,7-dimethyl- (CAS 5392-40-5)	Listed.
Acetic acid, phenylmethyl ester (CAS 140-11-4)	Listed.
Citric Acid (CAS 77-92-9)	Listed.
Hydrochloric acid (CAS 7647-01-0)	Listed.
Isopropanol (CAS 67-63-0)	Listed.
Lactic Acid (CAS 79-33-4)	Listed.

US. Massachusetts RTK - Substance List

Hydrochloric acid (CAS 7647-01-0)
Isopropanol (CAS 67-63-0)

US. New Jersey Worker and Community Right-to-Know Act

Hydrochloric acid (CAS 7647-01-0)
Isopropanol (CAS 67-63-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrochloric acid (CAS 7647-01-0)
Isopropanol (CAS 67-63-0)

US. Rhode Island RTK

Hydrochloric acid (CAS 7647-01-0)
Isopropanol (CAS 67-63-0)

US. California Proposition 65

Not Listed.

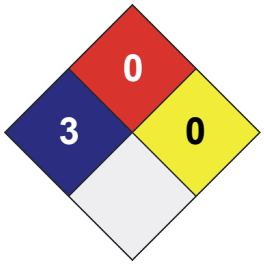
Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
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

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0



Disclaimer

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

Issue date 15-May-2017

Version # 01

Effective date 15-May-2017

Prepared by	Dell Tech Laboratories, Ltd. Phone: (519) 858-5021
Other information	For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document. Redbook revision # 11, 12/5/16