Safety Data Sheet

LIME DISSOLVER

SDS Revision Date: **12/14/2022**

1. Identification

1.1. Product identifier

Product Identity	LIME DISSOLVER
Alternate Names	30-352, Blended Formula, Lime Dissolver, Superior Scale Remover- 55 gallon

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use	Dissolves lime, scale, urine salts, mineral deposits. Clean concrete, clears lime-clogged hot water and boiler coils, pipes. Also cleans cooling towers, toilet bowls, urinals, valves, steam equipment, etc.
Application Method	Read all precautions and instructions carefully before and after use.

1.3. Details of the supplier of the safety data sheet

Company Name	ComStar International Inc. 20-47 128th Street, College Point, NY 11356
Telephone No.	718-445-7900 800-328-0142 Fax: 718-353-5998

Emergency 24 HR response No: 1-800-424-9300 & 703-527-3887 CHEMTREC

Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Corrosive to metals: H290 Category 1	May be corrosive to metals
Skin Corr/Irri: H314 Category 1B	Causes severe skin burns and eye damage.
Eye Dam/Irri: H318 Category 1	Causes serious eye damage.
Specific target organ toxicity (single exposure): Category 1	
Target Organs - Respiratory system: H335 Category 3	May cause respiratory irritation

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

SIGNAL WORD

DANGER

H290 May be corrosive to metals

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H335 May cause respiratory irritation

[Prevention]:

P234 Keep only in original container

P260 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash face, hands and any exposed skin thoroughly after handling

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 If swallowed: rinse mouth, do not induce vomiting.

P303+361 +353 If on skin (or hair): remove/take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+340+P310 If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351 +338: If in eyes: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a poison center or doctor / physician.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

[Storage]:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P406 Store in corrosive resistant polypropylene container with a resistant in liner

Store in a dry place

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

Hazards not otherwise classified (HNOC)

None identified

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
HYDROCHLORIC ACID SOLUTION CAS #: 7647-01-0	<20	Metal corrosion: category1 H290 Skin corrosion. category1B H314 Eye dam. category1 H318 Specific target organ toxicity (single exposure): category 1 H335 Target organs - Respiratory system: category 3 H335	

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Eyes Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2. Most important symptoms and effects, both acute and delayed

Overview Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomatically

5. Fire-fighting measures

5.1. Extinguishing Media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

5.2. Unsuitable Extinguishing Media

No information available

Flash Point

No information available

Method -

No information available

5.3. Autoignition Temperature

No information available

5.4. Explosion Limits

Upper

No data available

Lower

No data available

Sensitivity to Mechanical Impact

No information available

Sensitivity to Static Discharge

No information available

5.5. Special hazards arising from the substance or mixture

Corrosive material. Causes burns by all exposure routes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Hydrogen chloride gas.

5.6. Advice for fire-fighters

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

ERG Guide No. ---137

NFPA

Health	Flammability	Instability	Physical hazards
3	0	0	N/A

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralizing material (e.g., Chemizorb® H^+, Merck Art. No. 101595). Dispose of properly. Clean up affected area. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Metals. Strong oxidizing agents. Bases. Sodium hypochlorite. Amines. Fluorine. Cyanides. Alkaline. See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Hydrochloric acid solution	Ceiling: 2 ppm	Ceiling: 7 mg/m3 (Vacated) Ceiling: 5 ppm (Vacated) Ceiling: 7 mg/m3	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m3	Ceiling: 2 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location.

8.2. Exposure controls

Respiratory	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirators if exposure limits are exceeded or if irritation or other symptoms are experienced.
Eyes/face protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or EuropeanStandardEN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure
Hygiene Measures	Handle in accordance with good industrial hygiene

9. Physical and chemical properties

Appearance	Red colored liquid
Odor	Pungent
Odor threshold	No information available
pH	<1
Melting point / freezing point	-35 °C / -31 °F
Initial boiling point and boiling range	57 °C / 135 °F @ 760 mmHg
Flash Point	No information available
Evaporation rate (Ether = 1)	No information available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	**Lower Explosive Limit:** No data available **Upper Explosive Limit:** No data available
Vapor pressure (Pa)	125 mbar @ 20 °C
Vapor Density	1.27
Specific Gravity	1.18
Solubility in Water	Soluble in water
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity (cSt)	1.8 mPa.s @ 15°C
Molecular Formula	HCl
Molecular Weight	36.46
Volatiles (% by weight)	N/A
Octanol/Water Partition Coefficient	N/A

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity
None known, based on information available
10.2. Chemical stability
Stable under normal circumstances.
10.3. Possibility of hazardous reactions
Contact with metals may evolve flammable hydrogen gas.
10.4. Conditions to avoid
Incompatible products. Excess heat
10.5. Incompatible materials
Metals, Strong oxidizing agents, Bases, sodium hypochlorite, Amines, Fluorine, Cyanides, Alkaline
10.6. Hazardous decomposition products
Hydrogen chloride gas
10.7. Hazardous Polymerization
Contact with metals may evolve flammable hydrogen gas.

11. Toxicological information

Acute toxicity

Product Information

Oral LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50	Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Vapor LC50	Based on ATE data, the classification criteria are not met. ATE > 20 mg/

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid solution	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	1.68 mg/L (Rat) 1 h

Toxicologically Synergistic Products No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure.

Irritation Causes burns by all exposure routes.

Sensitization No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico

Hydrochloric acid solution	7647-01-0	Not listed	Not listed	Not listed	Not listed	Not listed

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

Classification	Category	Hazard Description
Mutagenic Effects		No information available
Reproductive Effects		No information available
Developmental Effects		No information available.
Teratogenicity		No information available
STOT-single exposure	---	Respiratory system
STOT-repeated exposure	---	None known
Aspiration hazard	---	No information available

Symptoms / effects, both acute and Product is a corrosive material. Use of gastric lavage or emesis is contraindicated.

Delayed	Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
Endocrine Disruptor Information	No information available
Other Adverse Effects	The toxicological properties have not been fully investigated.

12. Ecological information

12.1. Ecotoxicity

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

Aquatic Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Hydrochloric acid solution		282 mg/L LC50 96 h Gambusia affinis mg/L LC50 48 h Leucscus idus		56mg/L EC50 72h Daphnia

12.2. Persistence and degradability

Persistence is unlikely based on information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

Will likely be mobile in the environment due to its water solubility

12.5. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN 1789	UN 1789	UN 1789
14.2. UN proper shipping name	UN 1789, Hydrochloric acid, solution,	Hydrochloric acid, solution	Hydrochloric acid, solution
14.3. Transport hazard class(es)	**DOT Hazard Class: 8**	**IMDG:** 8 **Sub Class:** Not Applicable	**Air Class: 8**
14.4. Packing group	II	II	II

14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags

Hydrochloric acid solution	76solution47-01-0	X	ACTIVE	--

Legend:
TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed
TSCA 12(b) - Notices of Export Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea(KECL)

Component	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Hydrochloric acid solution 7732-18-5	X	--	231-595-7	X	X	X	X	X	KE-20189

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313

Component	CAS No	Weight %	SARA 313 – Threshold Values %
Hydrochloric acid solution	7647-01-0	>20%	1.0

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Hydrochloric acid solution	--	5000 lb.	--	--

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydrochloric acid solution	X	--	

OSHA - Occupational Safety and Health Administration; Not applicable

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Hydrochloric acid solution	--	TQ: 5000 lb

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)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hydrochloric acid solution	5000 lb	5000 lb

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

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydrochloric acid solution	X	X	X	X	X

U.S. Department of Transportation
Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount.

Component	DHS Chemical Facility Anti-Terrorism Standard
Hydrochloric acid solution	Release STQs - 15000lb (concentration >=37%) Release STQs - 5000lb (anhydrous) Theft STQs - 500lb (anhydrous)

Other International Regulations

Mexico – Grade No information available

Authorization/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC1907/2006) article 59 - CandidateList of Substances of Very High Concern (SVHC)
Hydrochloric acid solution	---	Use restricted. See item 75. (see link for restriction details)	---

Safety, health and environmental regulations/legislation specific for the substance or mixture

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

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