



SAFETY DATA SHEET

1. Identification

Product Identifier	Lime-B-Gone	
Other means of identification	CU-5010	
Product code		
Recommended use	Lime and scale remover.	
Recommended restrictions	Professional use only.	
Manufacturer information		
Company name	Chemical Universe, Inc.	
Address	1133 Saline St. North Kansas City, MO 64116	
Telephone	(816) 471-3602	
FAX	(816) 474-3302	
Emergency phone number	PERS	(800) 633-8253
	24-hour Emergency	(800) 633-8253

2. Hazard(s) Identification

Physical hazards	Corrosive to metals.	Category 1
Health hazards	Serious eye damage. Skin corrosion.	Category 1 Category 1B
Environmental hazards	Not classified.	
OSHA defined hazards	None.	
Label elements		



Signal word	DANGER
Hazard statement	May be corrosive to metals. May be harmful if swallowed. Causes severe skin burns and eye damage.
Precautionary statement	
Prevention	Keep only in original container. Do not breathe dusts or mists. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response	Absorb spillage to prevent material damage. Call a POISON CENTER/doctor/medical professional if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable breathing. Immediately call a POISON CENTER/doctor/medical professional. Specific treatment (see section 4 on the Safety Data Sheet). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention preferably from an ophthalmologist.
Storage	Store in corrosive resistant container with a resistant inner lining. Store locked up.



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Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None.

Supplemental information None.

3. Composition/information on ingredients

Mixture Component(s)		
Chemical name	CAS number	%
Phosphoric Acid	7664-38-2	15-20
Hydrochloric Acid	5329-14-6	1-5
Other components below reportable levels		75-84

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Rinse with water for at least 15 minutes. Remove contact lenses if present and easy to do so. Immediately call a physician or transport to hospital.

Ingestion Rinse mouth. Get medical attention immediately. Do not induce vomiting.

Most important symptoms/effects, acute and delayed Can cause serious eye damage. Can cause burning sensation in affected contact areas. Symptoms can include shortness of breath, respiratory tract irritation or damage. Phosphoric acid is extremely destructive to tissues of the mucous membranes and upper respiratory tract, eyes, and skin.

Indication of immediate medical attention and special treatment needed Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse. Use with extreme caution.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread a liquid-fueled fire.

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

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.

Firefighting 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.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up.



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Avoid inhalation of vapors or mists. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ensure adequate ventilation. Local

authorities should be advised if significant spillages cannot be contained or enter storm sewers or open waterways. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

This product is fully miscible in water.

Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. If available and practical, use soda ash or equivalent weak caustic to neutralize acid before collection. Absorb in vermiculite, dry sand or earth and place into compatible containers. Prevent entry into waterways, sewers, basements or confined areas. Following product recovery, flush effected area with water or a suitable alkaline neutralizing solution.

Small spills: Wipe up with absorbent material (e.g. cloth, synthetic textile wipes). Clean surface thoroughly to remove residual contamination.

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

Environmental precautions

Avoid discharge into areas not consistent with package labeling.

7. Handling and storage

Precautions for safe handling

Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Phosphoric Acid	PEL	1 mg/m ³

US ACGIH Threshold Limit Values

Components	Type	Value
Phosphoric Acid	STEL	3 mg/m ³

Biological limit values

No information.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels to an acceptable level. It is recommended that users of this product perform a risk assessment to determine the appropriate personal protective equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Avoid contact with eyes. Wear splash-rate safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. PVS or nitrile/butyl rubber are recommended materials

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.



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Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke or use chewing tobacco. 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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical State	Liquid.
Color	Colorless.
Odor	Characteristic; Slight sulfur odor.
Odor threshold	Not available.
pH	0-1
Melting/freezing point	14°F (-10°C) estimated.
Initial boiling point and boiling range	>212°F (>100°C)
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability	Not available.
Flammability Limits	
Upper	Not available.
Lower	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity (water=1)	1.19
Solubility in water	Soluble.
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	This product is stable and non-reactive under normal conditions of use.
Chemical stability	Material is stable under normal conditions. Store in a cool dark place.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid storage in elevated temperatures.
Incompatible materials	Bases, amines, metals. DO NOT MIX WITH BLEACH.
Hazardous decomposition products	No hazardous decomposition products occur. In case of fire see section 5.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Do not ingest. May be harmful if swallowed.
Inhalation	Do not inhale. May cause damage to the upper respiratory tract.
Skin contact	Can cause severe skin burns.



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Eye contact Can cause serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics Burning sensation, coughing, wheezing, shortness of breath. Phosphoric acid is extremely destructive to mucous membranes and upper respiratory tract, eyes, and skin.
Acute toxicity May be harmful if swallowed.

Product Lime-B-Gone (CAS mixture)		
Exposure Classification	Route and Species	LD ₅₀ / LC ₅₀
Acute	Oral, rat	5,748 mg/kg estimated
*Estimates for product may be based on additional component data not shown		

Skin corrosion/irritation Causes severe skin burns.
Serious eye damage/ irritation Causes serious eye damage.
Respiratory sensitization Not considered a respiratory sensitizer.
Skin sensitization Not considered a skin sensitizer.
Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity Not considered a carcinogen.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not Listed.
Reproductive toxicity No data available.
Specific target organ toxicity – single exposure May cause damage to the upper respiratory tract with prolonged inhalation.
Specific target organ toxicity – repeated exposure No data available.
Aspiration hazard No data available.

12. Ecological information

Ecotoxicity		
Product Lime-B-Gone (CAS mixture)		
Aquatic	Species	LC ₅₀
Fish	Fathead Minnow	>450 mg/L estimated
*Estimates for product may be based on additional component data not shown		
<i>Specific toxicity threshold cannot be derived as the potential effects are highly dependent upon the pH of the receiving water and its buffer capacity highly variable.</i>		

Persistence and degradability Chemicals of this class are expected to readily degrade in open, oxic environment.
Bio-accumulative potential Not data available. Components of this product are highly water-soluble and reactive with other chemical systems; Very low bio-accumulation potential is expected
Partition coefficient n-octanol/water (log K_{ow}) Not applicable.
Mobility in soil No data available. Listed components are inorganic and highly water-soluble. In aqueous medium, the listed chemical(s) will readily dissociate into ionic molecules that will be weakly adsorbed onto organic matter particles. These components are expected to exhibit moderate to high mobility in saturated and semi-saturated soils.
Other adverse effects May be harmful to plants or wildlife in high concentrations.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.



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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. As packaged, this product may meet criteria defining RCRA corrosive (D002) hazardous wastes when disposed. (40 CFR Part 261, Subpart C). Before selecting disposal method, ensure that the waste materials have been properly assessed and, as necessary, tested to confirm regulatory status.
Waste from residues/unused product	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 contain product residue, follow label warnings even after container is emptied.

14. Transport information

USDOT

UN number	UN3264
UN proper shipping name	Corrosive liquids, acidic, inorganic, n.o.s. (contains: phosphoric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packaging group	III
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not intended to be transported in bulk.
DOT Label	



15. Regulatory information

US federal regulations

SARA 302 Extremely hazardous substance	Not listed.
SARA 304 Emergency release notification	Not listed.
SARA 311/312 Hazard Categories	
Immediate Hazard - Yes	
Delayed Hazard - No	
Fire Hazard - No	
Pressure Hazard - No	
Reactivity Hazard - No	
SARA 313 (TRI reporting)	Not listed

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986

This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to threshold determination and Safe Harbor notification (1/2019)

16. Other information, including date of preparation or last revision

Issue date 12/30/2014
 Revision date 2/14/2019, 9/17/2019
 Version # 4
 HMIS® ratings Health: 3
 Flammability: 0
 Physical hazard: 0

HEALTH	3
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	<input type="checkbox"/>

Acid

NFPA ratings Health: 3
 Flammability: 0
 Instability: 0



Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, and have been obtained from resources believed to be reliable. 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 related 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 by the text.

Revision information 12/6/2017 Transportation information; Ingredient information; Toxicological information; Ecological information.
 2/14/19. Format update, waste code; spill response update; protective equipment detail, physical description (minor amendment) Prop 65; HMIS and NFPA pictograms.
 9/17/2019 Toxicology update; formulation table change back to inorganic matrix only