



# SAFETY DATA SHEET

## 1. Identification

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

## 2. Hazard(s) Identification

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



<b>Signal word</b>	Danger.	
<b>Hazard statement</b>	May be corrosive to metals. Causes severe skin burns and eye damage.	
<b>Precautionary statement</b>		
<b>Prevention</b>	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.	
<b>Response</b>	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/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.	
<b>Storage</b>	Store in corrosive resistant container with a resistant inner lining. Store locked up.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None.	
<b>Supplemental information</b>	None.	

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
Phosphoric Acid	7664-38-2	15-20
Hydrochloric Acid	7647-01-0	1-5
Other components below reportable levels		90-100

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. Get medical attention immediately. Do not induce vomiting.
<b>Most important symptoms/effects, acute and delayed</b>	Can cause serious eye damage. Can cause burning sensation in affected areas. Shortness of breath, respiratory tract irritation or damage. Hydrochloric acid is extremely destructive to tissues of the mucous membranes and upper respiratory tract, eyes, and skin.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general support measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	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

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed (hydrogen chloride gas).
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protecting clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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. 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. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	This product is miscible in water.  Large spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. 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 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 <sup>3</sup>
Hydrochloric Acid	PEL	5 ppm

#### US ACGIH Threshold Limit Values

Components	Type	Value
Phosphoric Acid	STEL	3 mg/m <sup>3</sup>
Hydrochloric Acid	STEL	2 ppm

**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 safety glasses with side shields (or goggles).

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

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

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**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** Clear liquid.

**Color** Pink.

<b>Odor</b>	Characteristic.
<b>Odor threshold</b>	Not available.
<b>pH</b>	0-1
<b>Melting/freezing point</b>	14°F (-10°C) estimated.
<b>Initial boiling point and boiling range</b>	>212°F (>100°C)
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability</b>	Not available.
<b>Flammability Limits</b>	
<b>Upper</b>	Not available.
<b>Lower</b>	Not available.
<b>Vapor pressure</b>	<0.01 mmHg at 77°F (25°C).
<b>Vapor density</b>	Not available.
<b>Specific gravity (water=1)</b>	1.15
<b>Solubility in water</b>	Soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

## 10. Stability and reactivity

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

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Do not ingest. May be harmful if swallowed.
<b>Inhalation</b>	Do not inhale. May cause damage to the upper respiratory tract.
<b>Skin contact</b>	Can cause severe skin burns.
<b>Eye contact</b>	Can cause serious eye damage.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning sensation, coughing, wheezing, shortness of breath. Hydrochloric acid is extremely destructive to mucous membranes and upper respiratory tract, eyes, and skin.
<b>Acute toxicity</b>	May be harmful if swallowed.

<b>Product</b>	<b>Route and Species</b>	<b>LD<sub>50</sub></b>
Lime-B-Gone (CAS mixture)		
<b>Acute</b>	<i>Oral, rat</i>	7,900 mg/kg estimated

\*Estimates for product may be based on additional component data not shown

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

## 12. Ecological information

### Ecotoxicity

Product	Species	LC <sub>50</sub>
Lime-B-Gone (CAS mixture)		
<b>Aquatic</b>		
Fish	Fathead Minnow	516 mg/L estimated

\*Estimates for product may be based on additional component data not shown

<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulative potential</b>	Not data available
<b>Partition coefficient n-octanol/water (log K<sub>OW</sub>)</b>	Not available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	May be harmful to plants or wildlife in high concentrations.

## 13. Disposal considerations

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues/unused product</b>	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).
<b>Contaminated packaging</b>	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

### DOT

<b>UN number</b>	UN1760
<b>UN proper shipping name</b>	Corrosive liquids, n.o.s. (contains: phosphoric acid, hydrochloric acid)
<b>Transport hazard class(es)</b>	

<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Packaging group</b>	III
<b>Marine pollutant</b>	No
<b>Special precautions for user</b>	Read safety instructions, SDS, and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not intended to be transported in bulk.
<b>DOT</b>	



## 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.

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

<b>Issue date</b>	12/30/2014
<b>Revision date</b>	12/30/2014
<b>Version #</b>	1
<b>HMIS® ratings</b>	Health: 3 Flammability: 0 Physical hazard: 0
<b>NFPA ratings</b>	Health: 3 Flammability: 0 Instability: 0
<b>Disclaimer</b>	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**

First issue