



SAFETY DATA SHEET

1. Identification

Product Identifier Lo Temp Chlorine

Other means of identification

Product code CU-5430

Recommended use For automatic dish machines.

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 Not classified.

Health hazards Serious eye damage Category 1
Skin corrosion Category 1

Environmental hazards Not classified.

OSHA defined hazards None

Label elements



Signal word Danger

Hazard statement Causes severe skin burns and eye damage.

Precautionary statement

Prevention Wash hands and exposed skin thoroughly after handling. Do not breathe dust or mists. Wear protective gloves/protective clothing/eye protection/face protection.

Response 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 for 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.

Storage Store locked up.

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

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

Supplemental information None.

3. Composition/information on ingredients

| Mixtures | | |
|---------------------|------------|------|
| Chemical name | CAS number | % |
| Sodium hypochlorite | 7681-52-9 | 8-12 |
| Sodium hydroxide | 1310-73-2 | 2-4 |

4. First-aid measures

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| 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 areas. Shortness of breath, respiratory tract irritation or damage. Sodium hydroxide 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

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| Suitable extinguishing media | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| 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 | Self-contained breathing apparatus and full protecting clothing must be worn in case of fire. |
| 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. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

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| 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. 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. |
| Methods and materials for containment and cleaning up | <p>This product is miscible in water.</p> <p>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.</p> <p>Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original container for re-use. For waste disposal, see section 13 of the SDS.</p> |
| Environmental precautions | Avoid discharge into areas not consistent with package labeling. |

7. Handling and storage

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| 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 |
|------------------|------|---------------------|
| Sodium hydroxide | PEL | 2 mg/m ³ |

US ACGIH Threshold Limit Values

| Components | Type | Value |
|------------------|------|---------------------|
| Sodium hydroxide | STEL | 2 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 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

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| Physical State | Liquid. |
| Color | Clear to light amber. |
| Odor | Chlorine. |
| Odor threshold | Not available. |
| pH | 13-14 |
| Melting/freezing point | 3°F(-16.11°C) |
| Initial boiling point and boiling range | <230°F(<110°C) |
| Flash point | Not available. |
| Evaporation rate | Not available. |

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|--|----------------|
| Flammability | Not available. |
| Flammability Limits | |
| Upper | Not available. |
| Lower | Not available. |
| Vapor pressure | Not available |
| Vapor density | Not available. |
| Specific gravity (water=1) | 1.23 |
| Solubility in water | Soluble. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |

10. Stability and reactivity

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| Reactivity | Reacts violently with strong acids. This product may react with oxidizing agents. |
| Chemical stability | Material is stable under normal conditions. Store in a cool dark place. |
| Possibility of hazardous reactions | Reacts violently with strong acids. This product may react with oxidizing agents. Hazardous polymerization does not occur. |
| Conditions to avoid | Avoid storage in elevated temperatures. Keep away from heat, sparks, and open flame. Do not mix with other chemicals. |
| Incompatible materials | Acids, oxidizing agents, bases, alkalis (organic) |
| Hazardous decomposition products | Chlorine, hydrogen chloride. In case of fire see section 5. |

11. Toxicological information

Information on likely routes of exposure

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| Ingestion | Do not ingest. Causes digestive tract burns. |
| Inhalation | Prolonged inhalation may be harmful. May cause irritation to the respiratory system. |
| Skin contact | Can cause severe skin burns. |
| Eye contact | Can cause serious eye damage. |
| Symptoms related to the physical, chemical and toxicological characteristics | Burning sensation, coughing, wheezing, and shortness of breath. Sodium hydroxide is extremely destructive to mucous membranes, eyes, and skin. |
| Acute toxicity | Not classified. |

| Product | Route and Species | LD50 |
|--------------------------------|--------------------------|------------------------|
| Lo Temp Chlorine (CAS mixture) | | |
| Acute | <i>Oral, rat</i> | >5,000 mg/kg estimated |

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

| | |
|--------------------------------------|--|
| Skin corrosion/irritation | Can cause severe skin burns. |
| Serious eye damage/irritation | Can cause 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 No data available.
Specific target organ toxicity – repeated exposure No data available.
Aspiration hazard No data available.

12. Ecological information

Ecotoxicity

| Product | Species | Test Results |
|--------------------------------|---------------|--|
| Lo Temp Chlorine (CAS mixture) | | |
| Aquatic | | |
| Fish | (Unspecified) | LC ₅₀ = 0.55 mg/L estimated |
| Crustacea | Daphnia Magna | EC ₅₀ = 0.93 mg/L estimated |

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

Persistence and degradability No data available.
Bioaccumulative potential Accumulation in aquatic organisms is expected.
Partition coefficient n-octanol/water (log K_{ow})
 Not available.
Mobility in soil No data available.
Other adverse effects Very toxic to aquatic life with long lasting effects.

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.
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 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

DOT

UN number UN1760
UN proper shipping name Corrosive Liquids, n.o.s. (Contains: Sodium Hypochlorite)
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 Not intended to be transported in bulk.

to Annex II of MARPOL 73/78
and the IBC Code
DOT



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

| | |
|-----------------------------|---|
| Issue date | 2/20/2015 |
| Revision date | 2/20/2015 |
| Version # | 1 |
| HMIS® ratings | Health: 3 Flammability: 1 Physical hazard: 1 |
| NFPA ratings | Health: 3 Flammability: 1 Instability: 1 |
| 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 | First issue |