



**MATERIAL SAFETY DATA SHEET**

FORCE INDUSTRIES

MSDS: Lytestone  
EFFECTIVE DATE: 4-7-94  
REPLACES DATE: 2-1-91  
PAGE: 2 of 5  
CODE: 105

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**III. POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA**  
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Target organ statement: DANGER: Causes severe burns to skin, eyes, and respiratory system. May be fatal if swallowed or inhaled.

PEL and Source Reference: ACGIH TLV: 2.33 mg/m<sup>3</sup> for mixtures  
OSHA PEL: N/E - Mixture

Effects of Chronic Exposure: Contact burns, irritation to skin (scarring), eyes and respiratory system. Possible liver and kidney effects.

Effects of Acute Overexposure

Swallowing: May be fatal. Can cause damage to digestive system. Corrosive to mucous membranes.

Skin Absorption: None currently known.

Inhalation: Irritation to respiratory system. Coughing and sneezing. Existing lung disorders will be aggravated.

Skin Contact: Dermatitis, possible chemical burns, corrosive to skin. Existing disorders will be aggravated.

Eye Contact: Irritation to eyes, tearing, burn of eye surfaces, corrosive to eyes, may cause blindness.

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**IV. EMERGENCY AND FIRST AID PROCEDURES**  
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Swallowing: Call a physician at once or your poison control center. Advise of Section II immediately. May be fatal! Corrosive to mucous membranes.

Skin: Promptly flush with water to remove all residue. If rash or burn develops, consult a physician. Material is corrosive.

Inhalation: Remove to fresh air. If fumes are inhaled, call a physician.

Eyes: Flush with water for at least 15 minutes to remove all residue. Get medical help NOW! Blindness can result!

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**EMERGENCY PHONE NUMBER \* CALL CHEMTREC (800) 424-9300 \* AVAILABLE 24 HOURS**  
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**V. FIRE AND EXPLOSION DATA**  
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Flashpoint (°F): N/A

Flammable limits in air (% by volume)  
LOWER: N/A  
UPPER: N/A

Extinguishing media: Water, fog, or foam.

Special firefighting procedures: Full protective equipment required. May release zinc oxide and HCl fumes. Toxic metal halide fumes produced.

Unusual fire and explosion hazards: Dense smoke may be generated.

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**VI. REACTIVITY INFORMATION**  
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Stability considerations: Stable  
Conditions to avoid: None

Hazardous polymerization: Will not occur  
Conditions to avoid: None

Incompatibility  
Materials to avoid: None

Hazardous combustion or  
Decomposition products: Hydrogen chloride and zinc oxide

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**VII. SPILL AND LEAK RESPONSE**  
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Steps to be taken if material is released or spilled: Contain spill, absorb, sweep-up and dispose. Flush area to chemical sewer.

Waste disposal method: Dispose of in accordance with all local, state, and federal regulations.

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**VIII. SPECIAL PROTECTION INFORMATION**  
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Respiratory protection:

If the work station is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved mask.

Ventilation:

Maintain air flow away from user to remove all fumes and vapors, so that the PEL is never exceeded. Adhere to environmental regulations for exhausts.

Protective gloves:

Chemical and acid impervious.

Eye protection:

Chemical tight safety goggles. Do NOT wear contact lenses.

Other protective equipment:

Full protective equipment normally used in a soldering operation so as to prevent any contact.

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**IX. STORAGE, HANDLING AND SPECIAL PRECAUTIONS**  
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Precautions to be taken in handling and storage:

Store flux at ambient conditions. Wash thoroughly after handling to remove all residue.

Other precautions:

Do NOT breathe fumes. Professionally wash contaminated clothing before re-use. Existing lung disorders will have increased toxic susceptibility.

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**X. PHYSICAL AND CHEMICAL PROPERTIES**  
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Boiling Point (°F @ 760 mmHg): ~215  
Specific gravity (H<sub>2</sub>O = 1 @ 72°F): 1.46  
Vapor density (air = 1): < 1  
Vapor pressure: 3.5  
Percent volatiles by volume: 50  
Solubility in water: Appreciable  
Evaporation rate (butyl acetate = 1): < 1

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**XI. OPTIONAL INFORMATION**  
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Department of Transportation: DOMESTIC GROUND

Proper shipping name: Corrosive Liquid, N.O.S.  
(Zinc Chloride, Hydrochloric Acid)  
Hazard Class: Class 8  
ID & Packing Group Number: UN 1760, PG III  
ERG Guide Number: 60

Toxic Substance Control Act: All components of this compound are listed within the TSCA inventory.

Hazard Communication Program: Hazardous warnings and training requirements as mandated for  
(29 CFR 1910.1200) corrosive material.

State Right-to-Know Programs:

Pennsylvania: All components are listed in PA 34 Title III.

California: As currently manufactured this material contains no compounds subject to the reporting and labelling requirements of Proposition 65.

Miscellaneous:

Material contains in excess 10% zinc chloride; classified as a marine pollutant.

Other regulations may apply when shipping this material and are in the process of change and update, verify all applicable regulations prior to shipment either domestically or internationally via air, ground, or water.

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