

MATERIAL SAFETY DATA SHEET

MAY BE USED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200 AND SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 PUBLIC LAW 99-499. STANDARD SHOULD BE CONSULTED FOR SPECIFIC REQUIREMENTS.

SECTION I (IDENTIFICATION)

MANUFACTURER/ SUPPLIERS NAME:	EUTECTIC CORPORATION N94 W14355 Garwin Mace Drive Menomonee Falls, WI 53051 USA	TELEPHONE NUMBER: 1-800-558-8524
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PRODUCT NAME: Eutectic 157 Flux**PRODUCT CLASSIFICATION:** Flux**SECTION II (HAZARDOUS INGREDIENTS/IDENTITY INFORMATION)**

IMPORTANT: This section covers the materials from which these products are manufactured. The fumes and gases produced during normal use of these products are covered in Section V. The term "Hazardous" in "Hazardous Ingredients" should not only be interpreted as a term required and defined in OSHA Hazard Communication Standard (29 CFR Part 1910.1200), but also as defined by other regulatory agencies. The chemicals or compounds subject to reporting under Title III, in Section 313, of the Superfund Amendments and Reauthorization Act (SARA) are marked by the symbol #.

WARNING: This product contains or produces a chemical known to the State of California to cause birth defects (or other reproductive harm) and cancer. (California Health & Safety Code 25249.5 et seq.)

<u>INGREDIENTS</u>	<u>CAS NUMBER</u>	<u>Exposure Limit (mg/m³)</u>		<u>Percent Ingredients (by weight)</u>
		<u>OSHA PEL</u>	<u>ACGIH-TLV</u>	
Zinc Chloride #	7646-85-7	1	1	60 – 100
Ammonium Chloride	12125-02-9	Not listed	10 (as fume)	7 – 13
Water	7732-18-5	Not listed	Not listed	5 – 10
Sodium Fluoride	7681-49-4	2.5 (as F)	2.5 (as F)	1 – 5
Ethylene Glycol #	107-21-1	Not listed	100 (ceiling)	0.2 - 1.5

SECTION III (POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA)**Target organ statement:**

DANGER: Causes severe burns to skin, eyes, and respiratory system. May be fatal if swallowed or inhaled. **WELDING FUMES** (not otherwise specified) are considered to be carcinogenic defined with no further categorization by **NIOSH** and **IARC**.

SHORT TERM (ACUTE) OVEREXPOSURE TO PASTE:

Swallowing	May cause burns of mouth and throat.
Inhalation	Irritation to respiratory system. Coughing and sneezing. Existing lung disorders will be aggravated. Severe exposure may cause pulmonary edema. Metal fume fever may result from inhaling zinc oxide, which is a possible decomposition product at high temperatures.
Skin Contact	Dermatitis, possible chemical burns, and corrosive to skin. Existing disorders will be aggravated.
Eye Contact	Irritation to the eyes, tearing, burn of the eye surfaces, corrosive to the eyes, may cause blindness.

FLUORIDES - Short-term exposure to fluoride compounds produced may cause eye and skin burns, and pulmonary edema bronchitis. Exposure to extremely high levels of fluorides can cause abdominal pain, diarrhea, muscular weakness, and convulsions. In extreme cases it can cause loss of consciousness and death.

ETHYLENE GLYCOL: Symptoms to overexposure to ethylene glycol include irritation to eyes, skin, nose, throat, nausea vomiting, abdominal pain, lassitude (weakness, exhaustion), dizziness, stupor, convulsions, central nervous system, depression, and skin sensitization. Renal failure and brain injury may result.

LONG TERM (CHRONIC) OVEREXPOSURE: FLUORIDES - Overexposure to fluorides can cause serious bone erosion, excessive calcification of the bone and calcification of the ribs, pelvis and spinal column. May cause skin rash. **ETHYLENE GLYCOL**: Long term overexposure to ethylene glycol may effect the central nervous system and eyes. **EXPOSURE TO FLUX**: Contact burns, irritation to skin (scarring), eyes, and respiratory system. Possible liver and kidney effects.

SECTION IV (EMERGENCY AND FIRST AID PROCEDURES)

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 for 15 minutes to remove all residue. If rash or burn develops, consult a physician. Material is corrosive. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

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. Hold eyelids apart during irrigation. **Get immediate medical help - blindness may result.**

SECTION V (FIRE AND EXPLOSION DATA)

Flashpoint: Will not burn.

Extinguishing media: water, fog, or foam

Special fire fighting procedures: full protective equipment required. May release zinc oxide and zinc chloride.

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

Rating under HMIS: Health, 1; Flammability, 0; Reactivity, 1.

SECTION VI (REACTIVITY DATA)

Stability consideration: stable

Hazardous polymerization: will not occur

Conditions to avoid: none

Incompatibility: Materials to avoid: Cyanide - may release toxic HCN Sulfide - may release toxic hydrogen sulfide

Hazardous combustion or decompositions products: zinc oxide.

SECTION VII (SPILL AND LEAK RESPONSE)

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 federal state, and local regulations.

SECTION VIII (SPECIAL PROTECTION INFORMATION)

Respiratory protection: If the workstation is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved mask. Monitor fume levels.

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

Protective gloves: Rubber gloves.

Eye protection: Chemical safety goggles.

Other protective equipment: Full protective equipment normally used in soldering operation so as to prevent any contact. Review operations to avoid contact with hazardous gas, liquid, or solid. See also:
29CFR 1910.132 - 29 CFR 1910.140 Personal Protective Equipment
29 CFR 1910.251 - 29 CFR 1910.257 Welding, Cutting and Brazing

SECTION IX (STORAGE, HANDLING AND SPECIAL PRECAUTIONS)

Precautions to be taken in handling and storage: Store 157 flux at ambient conditions. Store in original container. Wash thoroughly after handling to remove all residue.

Other precautions: Do NOT breathe fumes. Professionally wash contaminated clothing before reuse. Existing lung disorders will have increased toxic susceptibility.

SECTION X (PHYSICAL PROPERTIES)**Appearance and odor:** Pink colored flux.

SECTION XI (OPTIONAL INFORMATION)**Department of Transportation** (Proper shipping name): Zinc Chloride Solution**Hazard class:** 8**ID & Pack. Group Number:** UN 1840, PG III**Toxic Substances Control Act:** all components of this compound are listed within the TSCA inventory.**SARA Title II Program:** This product contains the following toxic chemicals subject to reporting requirements of EPCRA of 1986 and 40 CFR 372:

<u>Chemical name</u>	<u>CAS nr.</u>	<u>Concentration</u>
Zinc compounds:	N/E	> 45 %

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 or update, verify all applicable regulations prior to shipment either domestically, internationally via air, ground, or water.

This information must be included in all MSDS that are copied and distributed for this material.

IARC: International Agency for the Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

PEL: Permissible Exposure Limit

OSHA: U.S. Occupational Safety and Health Administration

TLV: Threshold Limit Value

CAS: Chemical Abstracts Service Registry Number

Exposure limits are subject to change. Contact ACGIH, OSHA, NIOSH, and IARC for current values.

The information in this MSDS was obtained from sources we believe are reliable. However, this information is provided without any representation or warranty, expressed or implied, regarding accuracy or correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons we do not assume responsibility and expressly disclaim liability or loss, damage, or expense arising from it or in any way connected with the handling, storage, use, or disposal of the product.