

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 682 Flux**PRODUCT CLASSIFICATION:** Liquid 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</u>	<u>Exposure Limit (mg/m³)</u>		<u>Percent Ingredients (by weight)</u>
	<u>NUMBER</u>	<u>OSHA PEL</u>	<u>ACGIH -TLV</u>	
Zinc Chloride #	7646-85-7	1	1	40 – 70
Ammonium Chloride	12125-02-9	Not Listed	20	5 – 10
Hydrochloric Acid #	7647-01-0	2.98 (ceiling)	7.0 (ceiling)	5 – 10
Ethylene Glycol #	107-21-1	Not Listed	100(ceiling)	1 – 5

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

SECTION III (POTENTIAL HEALTH EFFECTS AND HEALTH HAZARD DATA)**Target organ statement:****DANGER:** Causes sever burns to skin, eyes, and respiratory system. May be fatal if swallowed or inhaled.**OSHA PEL:** not established-mixture.**SHORT TERM (ACUTE) OVEREXPOSURE to mixture:**

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.

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, zinc chloride and hydrogen chloride.

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

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

Rating under NFPA: 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: Strong acids, cyanides, and sulfides.

Hazardous combustion or decompositions products: zinc oxide and HCl.

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.

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: Wear appropriate chemical safety goggles and face shield when handling fluxes and chemical aids.

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 flux at ambient conditions. Store in plastic container or plastic lined or rubber lined containers. Do not store in steel containers. 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 AND CHEMICAL HAZARDS)

Appearance and odor: Liquid Flux

HYDROCHLORIC ACID: WARNING: STRONG ACID – HANDLE WITH CARE! CAUTION: Contact with common metals produces hydrogen, which forms explosive mixtures in air. HCL in fluxes is a reagent grade 36 – 38 %, balance water. Corrosive liquid may cause permanent visual and tissue damage. Excessive inhalation may cause pulmonary edema, circulatory failure, respiratory system failure, and collapse. If ingested, may be fatal, severe burns to mouth, throat stomach, nausea and vomiting. NFPA/HMIS: 3:0:0.

CHLORIDE COMPOUNDS: (zinc chloride, ammonium chloride): Overexposure may cause severe irritation or burns of the eyes and skin. Chloride compounds will form strong acids in the presence of water and may give off HCL gas in a fire. Ingestion will cause nausea.

ETHYLENE GLYCOL – Can affect the body if contact with the eyes, open skin wounds, or if ingested. Single dose oral toxicity is moderate. Excessive ingestion may cause central nervous system effects, pulmonary and kidney effects, serious injury or death. Inhalation of vapors may cause respiratory irritation. Ethylene glycol is present in small percentages by weight and should cause very little problems to the welder if proper ventilation procedures are used.

SECTION XI (OPTIONAL INFORMATION)

Department of Transportation: Proper shipping name; Corrosive Liquids, acidic, inorganic, NOS

Hazard class: 8

ID & Pack. Group Number: UN 3264, PG III

LABEL: CORROSIVE

CONTAINS: Zinc Chloride and Hydrochloric Acid

Toxic Substances Control Act: all components of this mixture 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	< 70 %

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

State Right to Know Programs:

Pennsylvania: All components are listed in PA code Title 34, Hazardous Substance List.

California: As currently manufactured this material contains no compounds subject to reporting and labeling 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 or update, verify all applicable regulations prior to shipment either domestically, internationally via air, ground, or water.

KEEP THIS PRODUCT OUT OF THE REACH OF CHILDREN.

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.