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 1: PRODUCT AND COMPANY IDENTIFICATION

NAME OF PRODUCT: **EUTECSOL 808**
SYNONYMS: **EUTECTIC 808 FLUX**
PRODUCT CODES: **XF808-198G, F808-594G**

MANUFACTURER/: SUPPLIER
EUTECTIC CORPORATION
N94 W14355 GARWIN MACE DRIVE
MENOMONEE FALLS, WI 53051 USA

TELEPHONE NUMBER: (262) 532-4677
FAX NUMBER: (262) 255-5542
EUTECTIC WEBSITE: www.eutectic.com

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night:
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

PRODUCT USE: Soldering Flux

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
WARNING: SOLDERING IRON ONLY, NO OPEN FLAME. FLAMMABLE!
Refer to American National Standard Z49.1 for fire prevention during welding and soldering.

Target organ statement: DANGER: May be fatal if swallowed.

Hazard categories:
Harmful if swallowed.
Causes burns.
Flam. Liq. 2
Skin Sens. 1

DANGER

GHS PICTOGRAMS; 07, 02

Contains: Ethyl alcohol

Hazard statements
H225 Highly flammable liquid and vapor
H317 May cause an allergic skin reaction

Precautionary statements
P285 In case of inadequate ventilation wear respiratory protection.
P314 Get medical advice/attention if you feel unwell.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P501 Dispose of contents/container to waste treatment facility in accordance with local and national regulations.

ROUTES OF ENTRY:
Primary route of entry is the respiratory system. Other possible routes are eyes, ingestion, and/or skin contact.

POTENTIAL HEALTH EFFECTS:
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 brazing and soldering fumes, which is a possible 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.

ACUTE HEALTH HAZARDS: see Section 11

CHRONIC HEALTH HAZARDS: see Section 11

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.).

WARNING: avoid breathing welding fumes and gases; they may dangerous to your health. Always use adequate ventilation and use appropriate personal protection equipment.

CARCINOGENICITY
WELDING FUMES (not otherwise specified) are considered to be carcinogenic defined with no further categorization by **NIOSH** and **IARC**.

SECTION 2 NOTES: Before using this product, contact your doctor to determine if exposure to product or use of this product will aggravate your medical conditions. Spatter from soldering may cause burns and start fires.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

IMPORTANT: This section covers the materials from which these products are manufactured. Any of 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 #.

Exposure Limit (mg/m^3)

INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH -TLV	Percent Ingredients (by weight)
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	60 – 100
Rosin (Gum Rosin)	8050-09-7	Not Listed	Not Listed	10 – 30
Dimethylamine Hydrochloride	506-59-2	Not Listed	Not Listed	1 – 5

CAS / EINECS NUMBER / HAZARD CLASSIFICATION FOR ABOVE INGREDIENTS

INGREDIENTS	CAS NUMBER	EINECS NUMBER	Hazard Classification per ECD 67/548/EEC
Ethyl Alcohol	64-17-5	200-578-6	F, R11
Rosin (Gum Rosin)	8050-09-7	232-475-7	R43
Dimethylamine Hydrochloride	506-59-2	208-046-5	Not listed

SECTION 3 NOTES: Exposure limits are subject to change. Contact ACGIH and OSHA for current values. See Section 16 for European Council Directive 67/548/EEC R-phrases

SECTION 4: FIRST AID MEASURES

EMERGENCY & FIRST AID PROCEDURES: Call for medical aid and inform them of the ingredients from Section 3. Employ first aid techniques recommended by The American Red Cross.

Ingestion: Immediately call a doctor or your poison control center. Inform them of the ingredients listed in Section 3. Swallowing flux may be fatal.

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.**

SECTION 4 NOTES: none

SECTION 5: FIRE FIGHTING MEASURES

Flammable Avoid open flame, sparks, and heat.

Flashpoint: 55.4 °F (13 °C)

NFPA HAZARD CLASSIFICATION:

Health: 1 Flammability: 3 Reactivity: 0 Special Hazard ----------

EXTINGUISHING MEDIA: alcohol foam, dry chemical, CO_2

SPECIAL FIRE FIGHTING PROCEDURES: In case of fire, toxic fumes may be produced. Use of full protective equipment required.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Dense smoke may be generated in a fire.

HAZARDOUS DECOMPOSITION PRODUCTS: None known

SECTION 5 NOTES: Refer to American National Standard Z49.1 for fire prevention during welding and soldering.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Do not discharge into the drain or bodies of water. Contain spill, absorb (i.e. sand, silica gel, etc), sweep up and dispose of in accordance with Federal, State, and Local regulations.

PERSONAL PRECAUTIONS: Wear head, hand, and body protection that help to prevent injury; including rubber apron and rubber gloves. Ensure of adequate ventilation.

ENVIRONMENTAL PRECAUTIONS: See section 12 and 13

SECTION 6 NOTES: None.

SECTION 7: HANDLING AND STORAGE

HANDLING: Avoid exposure to product; do not ingest and avoid contact with eyes. Use only in well ventilated areas. Some individuals can develop an allergic reaction to certain materials. Do not eat, drink, or smoke when using this product. Wash thoroughly after using this product.

STORAGE: Keep material sealed and stored at room temperature. After opening keep remaining product sealed and dry in original labeled packaging. Store at ambient room temperature and store away from strong acids and oxidizing agents. Do not store near food.

SECTION 7 NOTES: None.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION



Read and understand the manufacturer's instructions and precautionary label on this product.

ENGINEERING CONTROLS: Proper ventilation **must** be maintained.
VENTILATION: Use enough ventilation, local exhaust at the work area, or both, to keep the fumes and gases below the TLV's / PEL's in the workers breathing zone and the general area. Train the worker to keep his head out of the fumes. Monitor fume levels and do not exceed permissible exposure limits or values. Adhere to environmental regulations for exhausts.
RESPIRATORY PROTECTION: Do NOT breathe fumes. If the workstation is not properly ventilated to exhaust all fumes and vapors, use a NIOSH approved respirator. Monitor fume levels and keep exposure below the TLV's.
EYE PROTECTION: Wear appropriate brazing / soldering chemical safety goggles.
PROTECTIVE CLOTHING: Wear head, hand, and body protection that help to prevent injury; including rubber apron and rubber gloves. See ANSI Z49.1.
SKIN PROTECTION: Individuals having sensitive skin may find it beneficial to use a barrier cream or moisturizer when excessive or prolonged contact with skin is likely, along with rubber gloves.

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

WORK HYGIENIC PRACTICES: Professionally wash contaminated clothing before re-use. Food and drink should not be consumed or neither tobacco products used, nor cosmetics applied in area where flux exposures are possible.

EXPOSURE GUIDELINES Use industrial hygiene monitoring equipment to ensure that exposure does not exceed applicable national exposure limits. See Section 3 for ingredients.

EFFECTS OF OVEREXPOSURE - brazing or soldering may create one or more of the following health hazards:
FUMES AND GASES can be dangerous to your health.
PRIMARY ROUTES OF ENTRY are the respiratory system. Other possible routes are eyes, ingestion, and/or skin contact.
PREEXISTING respiratory or allergic conditions may be aggravated in some individuals (i.e. asthma, emphysema).

Brazing and soldering fumes cannot be classified simply. The composition and quantity of both are dependent upon the metal being brazed or soldered, the process, procedure, and the filler material used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being brazed or soldered (such as paint, plating, etc.), the volume of the work area, the quality and the amount of ventilation, position of the worker's head with

respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities).

When the material is consumed, fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section II. Fume and decomposition products, not the ingredients in the rod, are important. Decomposition products include those originating from the volatilization, reaction, or oxidation of materials in Section 3, plus those from the base metal and coating, etc., as noted above. These components are virtually always present as complex oxides and not as metals (Characterization of Arc Welding Fume: American Welding Society).

SECTION 8 NOTES: None

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark colored semi-liquid, slight rosin odor
Active temperature range: 420 °F – 430 °F (215 °C – 220 °C)
Flash point: 55.4 °F (13 °C)
Solubility in water: High

pH-Value: Not determined
Boiling point: 278.6 ºF (137 ºC)
Melting point: Not applicable
Specific gravity: Not determined

SECTION 10: STABILITY AND REACTIVITY

GENERAL: This item is only intended for use in soldering applications.

STABILITY: Product is chemically stable and non-reactive.

CONDITIONS TO AVOID: Flame and excess heat.

MATERIALS TO AVOID: none known.

HAZARDOUS POLYMERIZATION: Will not occur.

REACTIVITY: None.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: none known.

SECTION 10 NOTES: In other countries the exposure limits listed in Section 3 may be different and the appropriate country standards should be used.

SECTION 11: TOXICOLOGICAL INFORMATION

Threshold Limit Value: The **ACGIH** recommended general limit for welding fume NOS (not otherwise specified) is 5 mg/m³. The **ACGIH 1999** preface states: "The **TLV-TWA** should be used as guides in the control of health hazards and should not be used as firm lines between safe and dangerous concentrations." See Section 8 for specific fume constituents that may modify the **TLV**. Brazing/soldering vapors and fumes from some brazing/soldering fluxes may cause metal fume fever. Symptoms are similar to influenza type sickness, including chills, fever, head and muscle ache, tightness in chest, dryness of nose, mouth, muscular pain, nausea, and vomiting. Symptoms can appear within several hours of exposure and may last 6 -24 hours. Consult a doctor immediately if any of these symptoms develop after using the product.

SHORT TERM (ACUTE) OVEREXPOSURE: to fumes may contribute to respiratory irritations. **Poison by ingestion.** Exposure to high ethyl alcohol vapor concentrations may cause upper respiratory weakness, drowsiness, and unconsciousness. Liquid and vapor contact can cause eye irritation.

LONG TERM (CHRONIC) OVEREXPOSURE: to fumes may contribute to respiratory irritations.

EXPOSURE TO FLUX: possible irritation to skin, eyes, and respiratory system.

SECTION 11 NOTES: Monitor fume levels when using this product. See safety phrases in Section 16 for further information.

SECTION 12: ECOLOGICAL INFORMATION

CONTAMINATED PACKAGING: Empty containers should be taken for local recycling, recovery, or waste disposal. Contaminated flux should be disposed of in accordance with Federal, State, and Local regulations.

SPILLS: Very toxic to aquatic organisms may cause long term effects in the aquatic environment. Do not discharge into ground water or aquatic environment. Contain spill, absorb, sweep up and dispose of in accordance with Federal, State, and Local regulations.

SECTION 12 NOTES: None.

SECTION 13: DISPOSAL CONSIDERATION

WASTE DISPOSAL METHOD: Dispose of any waste residues in accordance with Federal, State, and Local regulations.

SECTION 13 NOTES: Review U.S. Federal Hazardous Waste Regulations §40 CFR261 to determine if this is hazardous in USA. Please be advised that state and local requirements, or other country requirements, for waste disposal may be more restrictive or otherwise different than U.S. Federal regulations. It is not possible to give this product a waste code number according to the European waste catalogue because only the intended use of the user consents the assignment of a specific code number.

SECTION 14: TRANSPORTATION INFORMATION

DOMESTIC TRANSPORT REGULATIONS (USA):

ID UN 1170
Department of Transportation (Proper shipping name): Ethyl alcohol solutions
Packing Group Number: PG III
Hazard class: 3
Hazard label: Flammable liquid

Flash Point: 55.4 °F (13 °C)

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: None

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.

SECTION 14 NOTES: Handle with care to avoid damaging the product. Keep product labeled and in original container.

SECTION 15: REGULATORY INFORMATION

Read and understand the manufacturer's Safety Data Sheet before handling or disposing of this product.

U.S. EPA TSCA (TOXIC SUBSTANCE CONTROL ACT): All constituents of these products are on the TSCA inventory list or are excluded from listing.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to our Local Emergency Planning Committee.

EPCRA/SARA TITLE III 313 TOXIC CHEMICALS:
The following metallic components are listed as SARA 313 "TOXIC CHEMICALS" and are potentially subject to annual SARA 313 reporting. See Section 3 to determine if the ingredient is present and for the percent.

INGREDIENT NAME	CAS NUMBER	DISCLOSURE THRESHOLD
Chromium & chromium compounds	7440-47-3	1.0 % de minimis concentration
Chromium VI	Not listed	0.1 % de minimis concentration
Barium compounds	Not listed	1.0 % de minimis concentration
Cobalt	7440-48-4	0.1 % de minimis concentration
Copper	7440-50-8	1.0 % de minimis concentration
Manganese	7439-96-5	1.0 % de minimis concentration
Nickel	7440-02-0	0.1 % de minimis concentration
Aluminum (fume or dust)	7429-90-5	1.0 % de minimis concentration
Silver	7440-22-4	1.0 % de minimis concentration

SECTION 15 NOTES: International rules may vary and the appropriate regulations should be followed as defined by the country where the product is used.

SECTION 16: OTHER INFORMATION

Prepared by Eutectic Corporation, USA

Ethyl alcohol
H225 Highly flammable liquid and vapor
R11 Highly flammable
S2 Keep out of the reach of children
S7 Keep container tightly closed
S16 Keep away from sources of ignition - no smoking

Rosin (Gum Rosin)
H317 May cause an allergic skin reaction
R43 May cause sensitization by skin contact
S2 Keep out of the reach of children
S24 Avoid contact with skin
S37 Wear suitable gloves

Read and understand the manufacturer's instructions and precautionary label on this product.
See American National Standard Z49.1, Safety in Welding and Cutting, published by the "American Welding Society," 550 N.W. LeJeune Road, Miami, FL 33126 and OSHA Publication 2206 (29CFR 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 for more detail on safe use of product.

SUPPLEMENTAL INFORMATION – DEFINITIONS:

IARC: International Agency for the Research on Cancer
NIOSH: National Institute for Occupational Safety and Health
OSHA: U.S. Occupational Safety and Health Administration
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service Registry Number
EINECS: European Inventory of Existing Chemical Substances
PEL: Permissible Exposure Limit
NTP: National Toxicology Program
TLV: Threshold Limit Value
ECD: European Council Directive
GHS: Globally Harmonized System

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