

<u>Chemical Name</u>: General purpose Aluminum Soldering Flux

Manufacturer: Engelhard

Container size: 4oz.

Location: VLA

Disposal: Place empty container in trash.

ENGELHARD CORP -- GENERAL PURPOSE, PASTE SOLDERING FLUX, GPL-FL _____ MSDS Safety Information FSC: 3439 MSDS Date: 02/25/1993 MSDS Num: BWFTW LIIN: 00N056136 Product ID: GENERAL PURPOSE, PASTE SOLDERING FLUX, GPL-FLUX MFN: 01 Responsible Party Cage: ENGEL Name: ENGELHARD CORP Address: 235 KILVERT ST City: WARWICK RI 02886 Info Phone Number: 401-739-9550 Emergency Phone Number: 800-424-9300 (CHEMTREC) Published: Y Contractor Summary Cage: 86337 Name: ENGELHARD CORP Address: 235 KILVERT ST City: WARWICK RI 02886 Phone: 401-739-9550 Cage: ENGEL Name: ENGELHARD CORP Address: 29001 SOLON RD City: SOLON OH 44139 Phone: 216-292-9200 Ingredients Cas: 8009-03-8 RTECS #: SE6780000 Name: PETROLATUM % Wt: 70.8 OSHA PEL: 2 MG/M3 (MFR) ACGIH TLV: 2 MG/M3 (MFR) _____ _____ Cas: 7646-85-7 RTECS #: ZH1400000 Name: ZINC CHLORIDE (SARA 313) (CERCLA) % Wt: 25.3 OSHA PEL: 1 MG/M3 ACGIH TLV: 1MG/M3/2 STEL (FUME) EPA Rpt Qty: 1000 LBS DOT Rpt Qty: 1000 LBS _____ Name: SUPDAT:DISP OF MATL SHOULD BE I/A/W DISPOSAL CONSIDERATIONS. _____ Name: WASTE DISP METH: PART 261 ET SEQ. DISP/RECYCLING/RECLAMATION REQUIREMENTS WILL VARY BY LOCATION & TYPES OF DISP _____

Name: ING 4:SELECTED. CONSULT W/STATE, FEDERAL AND LOCAL REGULATORY AUTH.

NOTE: CHEM ADDNS, PROCESSING/OTHERWISE _____ Name: ING 5:ALTERING THIS MATL MAY MAKE WASTE MANAGEMENT INFO PRESENTED ABOVE INCOMPLETE, INACCURATE/OTHERWISE _____ Name: ING 6: INAPPROP. AS LOCAL REGS MAY VARY; ALL WASTE MUST BE DISP/RECYCLED/RECLAIMED I/Q/W FED, ST, & LOC ENVIRON _____ Name: ING 7:CONTROL REGULATIONS. -------Name: EYE PROT:& FULL LENGTH FACESHIELD (FP N). ______ Health Hazards Data ______ LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER. Route Of Entry Inds - Inhalation: YES Skin: YES Ingestion: YES Carcinogenicity Inds - NTP: NO IARC: NO OSHA: NO Effects of Exposure: ACUTE: EYE: CAUSES IRRITATION & MAY CAUSE BURNS. SKIN: CAUSES IRRITATION & MAY CAUSE BURNS. SENSITIZATION & ALLERGIC REACTIONS ARE POSSIBLE. INHALATION OF MISTS IS SEVERELY IRRITATING TO RESPIRATORY TRACT & CAN CAUSE BURNING SENSATION, COUGHIN G, WHEEZING, BRONCHITIS, PNEUMONITIS & PULMONARY EDEMA. MAY (EFTS OF OVEREXP) Explanation Of Carcinogenicity: NOT RELEVANT. Signs And Symptions Of Overexposure: HLTH HAZ: CAUSE ALLERGIC RESPIRATORY REACTIONS. INGESTION IS HARMFUL. CAN CAUSE SEVERE IRRITATION & POSSIBLE BURNS TO MUCOUS MEMBRANES. MAY CAUSE SEVERE ABDOMINAL PAIN, VOMITING & DIARRHEA. CHRONIC: PROLONGED/REPEATED OVEREXPOSURE MAY CAUSE LUNG DAMAGE. OVEREXPOSURE MAY CAUSE DELAYED KIDNEY INJURY. Medical Cond Aggravated By Exposure: MAY AGGRAVATE EXISTING RESPIRATORY AND/OR SKIN AILMENTS. First Aid: EYE: IMMED FLUSH W/PLENTY OF WATER FOR @ LEAST 30 MINS. HOLD EYELIDS OPEN DURING THIS FLUSHING W/WATER. CALL PHYS IMMED. SKIN:FLUSH W/PLENTY OF WATER. IF IRRIT PERSISTS, CALL PHYS. INHAL: REMOVE TO FRESH AIR. IF NOT BRTHG, GIVE ARTF RESP, PRE F MOUTH-TO-MOUTH. IF BRTHG IS DFCLT, GIVE OXYG. CALL PHYS. INGEST: IF SWALLOWED, DO NOT INDUCE VOMIT. GIVE LG QTYS OF WATER. CALL PHYS IMMED. NEVER (SUPDAT) _____ Handling and Disposal _____ Spill Release Procedures: CONTAIN SPILLAGE & SCOOP UP/VACUUM. NOTIFICATION OF NATL RESPONSE CENTER (800/424-8802) MAY BE REQD. REFER TO EPA, DOT & APPLIC ST & LOCAL REGS FOR CURRENT RESPONSE INFO. IT IS REC THAT EACH USER ESTABLISH SPILL PREVENTION, CONTROL & (SUPDA T) Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER. Waste Disposal Methods: EPA WASTE #:D002. THIS PROD MAY BE HAZ WASTE UNDER EPA WASTE REGS (SEE EPA WASTE ABOVE). BEFORE DISP, THIS PROD/MIX CONTAINING THIS PROD SHOULD BE TESTED FOR TOX CHARACTS (TC) UNDER CURRENT EPA HAZ WASTE REGS TCLP TESTING PROCEDURES, 40 CFR Handling And Storage Precautions: KEEP AWAY FROM FOOD & FEED PRODS. STORE IN TIGHTLY CLSD CNTNR. STORE IN COOL, DRY LOCATION AWAY FROM INCOMPATIBLE MATLS. Other Precautions: AVOID CONT W/ANY DUSTS, MISTS/FUMES RSLTG FROM USE OFTHIS PROD. WASH CONTAMD CLTHG BEFORE REUSE. PROVIDE SFTY SHOWER & EYE

WASHCLOSE TO WHERE THIS MATL IS BEING USED. _____ Fire and Explosion Hazard Information Flash Point Text: >356F,>180C Extinguishing Media: USE WATER, CARBON DIOXIDE OR FOAM. Fire Fighting Procedures: USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N). Unusual Fire/Explosion Hazard: NOT A FIRE OR EXPLOSION HAZARD. HOWEVER, TOXIC EMISSIONS ARE POSSIBLE IN A FIRE SITUATION. ______ Control Measures _____ Respiratory Protection: NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N). Ventilation: GENERAL, LOC EXHAUST VENT AS NEC TO CONTROL ANY AIR CONTAMINANTS TO W/IN THEIR TLVS DURING USE OF THIS PRODUCT. Protective Gloves: RUBBER/NEOPRENE GLOVES. Eye Protection: ANSI APPROVED CHEM WORKERS GOGGS Other Protective Equipment: BODY PROTECTION AS NEC TO PVNT SKIN CONT. EMERGENCY EYEWASH & DELUGE SHOWER WHICH MEET ANSI DESIGN STANDARDS (FP N). Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING. Supplemental Safety and Health: FIRST AID PROC: GIVE ANYTHING BY MOUTH TO UNCON PESON. SPILL RELEASE: COUNTERMEASURE PLAN (SPCC). SUCH PLAN SHOULD INCL PROCEDURES REUSE/DISP AS APPROP. NOTE: IN EVENT OF AN ACCIDENTAL RELEASE OF THIS MATL, ABOVE PROCEDURES SHOULD BE FOLLOWED. ADDNLY PROPER EXPOS CONTROLS & PERSONAL PROT EQUIP SHOULD BE USED & _____ Physical/Chemical Properties B.P. Text: 165F,74C M.P/F.P Text: 216F,102C Vapor Pres: <10 @ 20C Spec Gravity: 1.4 (H*20=1) PH: 1.8 Evaporation Rate & Reference: NOT KNOWN Solubility in Water: INSOLUBLE Appearance and Odor: AMBER JELLY; ODORLESS _____ Reactivity Data _____ Stability Indicator: YES Stability Condition To Avoid: NONE EXPECTED. Materials To Avoid: ALKALIES, OXIDIZERS. Hazardous Decomposition Products: HYDROGEN CHLORIDE, ZINC OXIDE AND OXIDES OF CARBON. Hazardous Polymerization Indicator: NO Conditions To Avoid Polymerization: NOT RELEVANT. Toxicological Information _____ Ecological Information ______ ______

MSDS Transport Information _____ _____ Regulatory Information _____ _____ Other Information _____ _____ HAZCOM Label _____ Product ID: GENERAL PURPOSE, PASTE SOLDERING FLUX, GPL-FLUX Cage: ENGEL Assigned IND: Y Company Name: ENGELHARD CORP Street: 29001 SOLON RD City: SOLON OH Zipcode: 44139 Health Emergency Phone: 800-424-9300 (CHEMTREC) Label Required IND: Y Date Of Label Review: 12/30/1994 Status Code: C Label Date: 12/30/1994 Origination Code: G Chronic Hazard IND: Y Eye Protection IND: YES Skin Protection IND: YES Signal Word: DANGER Respiratory Protection IND: YES Health Hazard: Moderate Contact Hazard: Severe Fire Hazard: Slight Reactivity Hazard: None Hazard And Precautions: COMBUSTIBLE. ACUTE:EYE:CAUSES IRRITATION & MAY CAUSE BURNS. SKIN: CAUSES IRRITATION & MAY CAUSE BURNS. SENSITIZATION & ALLERGIC REACTIONS ARE POSSIBLE. INHALATION OF MISTS IS SEVERELY IRRITATING TO RESPIRATORY TRACT & CAN CAUSE BURNING SENSA TION, COUGHING, WHEEZING, BRONCHITIS, PNEUMONITIS & PULMONARY EDEMA. MAY CAUSE ALLERGIC RESP REACTIONS. INGEST: HARMFUL. CAN CAUSE SEVERE IRRITATION & POSSIBLE BURNS TO MUCOUS MEMBRANES, SEVERE ABDOMINAL PAIN, VOMITING, DIARRHEA. CHRONIC:LUN G & KIDNEY DAMAGE. _____

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