



SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: UTILITY PASTE SOLDERING FLUX




Product Use: Soldering flux for copper, brass, galvanized iron, lead, zinc, tin, silver, nickel, mild steel, terne plate and malleable iron.

Manufacturer: **UTILITY**
700 Main Street
Westbury, NY 11590

Phone Number: Tel: 1-516-997-6300
Fax: 1-516-997-6345

24-hour Emergency: INFOTRAC: (800) 535-5053

Section 2: Hazards Identification

Protective Clothing	NFPA Rating (USA)	EU Classification	WHMIS (Canada)	Transportation
		Not classified as dangerous	 Not controlled	Not Regulated

Emergency Overview: Exposure to hazardous substances is not expected when handling this product for its intended use.

Appearance, Color and Odor: Tan paste; faint odor.

USA: This material is not considered hazardous by the OSHA hazard Communication Standard (29 CFR 1910.1200).

Canada: This is not a controlled product under WHMIS.

European Union (EU): This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Potential Health Effects

ACUTE (short term): see Section 8 for exposure controls

Relevant Route(s) of Exposure:

Skin contact, Inhalation.

- Inhalation:** Inhalation of vapors is not expected with normal use. Over exposure to high vapor concentrations may cause nasal and respiratory irritation, sore throat, coughing and difficulty breathing. High concentrations may also cause dizziness, headache, nausea, vomiting or in extreme cases, unconsciousness or asphyxiation.
- Ingestion:** Not an expected route of occupational exposure. Low oral toxicity. Swallowing large quantities may cause abdominal and chest pain, nausea, vomiting, diarrhea or dizziness. Aspiration into the lungs may occur during swallowing or from vomiting, resulting in lung injury.
- Skin:** This product has been tested and found to be non-irritating to skin.
- Eye:** This product has been tested and found to be non-irritating to eyes. Solids may cause temporary irritation as a foreign object in the eye.

CHRONIC (long term): see Section 11 for additional toxicological data

Chronic effects are not expected with normal use. Prolonged or repeated over exposure to high vapor concentrations may cause damage to the respiratory tract or lungs.

Medical Conditions Aggravated by Exposure:

Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

Interactions With Other Chemicals:

Not available



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Section 3: Composition / Information on Ingredients

Hazardous Ingredients:

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Wt. %</u>	<u>EINECS / ELINCS</u>	<u>Symbol</u>	<u>Risk Phrases</u>
Ammonium Chloride	12125-02-9	5 – 25	235-186-4	Xn, Xi	R22, R36
Zinc Chloride	7646-85-7	5 - 25	231-592-0	Xn, Xi	R22,R36
Petrolatum	8009-03-8	30 – 70	232-373-2	None	None

Note: See Section 16 for the full text of the R-phrases above.

Section 4: First Aid Measures

Inhalation: Move victim to fresh air and get medical attention.

Eye Contact: Flush with water for 15 minutes. Get medical attention.

Skin Contact: Quickly and gently, blot or brush away excess paste. Remove contaminated clothing and shoes. Wash with lukewarm water and non-abrasive soap. If irritation develops, get medical attention.

Ingestion: Call a physician or Poison Control Center at once. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5: Fire Fighting Measures

Flammable Properties: Product will burn if involved in a fire but does not ignite readily.

Suitable extinguishing Media: Use water spray, dry chemical, carbon dioxide, or an appropriate foam. Use water spray to cool fire-exposed containers.

Unsuitable extinguishing Media: Not applicable

Explosion Data:

Sensitivity to Mechanical Impact: Not applicable

Sensitivity to Static Discharge: Not applicable

Specific Hazards arising from the Chemical: During a fire, products of combustion may include carbon dioxide, carbon monoxide, ammonia, hydrogen chloride, smoke and irritating and toxic fumes may be formed.

Protective Equipment and precautions for firefighters: Self-contained breathing apparatus and protective clothing should be worn. Remove all unprotected personnel.

NFPA

Health: 0
Flammability: 0
Instability: 0

Section 6: Accidental Release Measures

Personal Precautions: Wear protective gloves. Spilled product may pose a slipping hazard.

Environmental Precautions: Prevent the product from entering sewers or waterways.

Methods for Containment: Stop the spill if it is safe to do so. Contain spilled flux with earth, sand, or absorbent material which does not react with spilled material.

Methods for Clean-up: Scrape or scoop up the spilled product and collect for proper disposal. Dispose of any contaminated, unusable product as described in Section 13 of this SDS.



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Section 7: Handling and Storage

Handling: Avoid contact with eyes and skin; do not breathe fumes. Do not ingest. Keep out of reach of children. Use this material with adequate ventilation. Keep container closed when not in use. Wash thoroughly with detergent and water after handling, before eating, drinking, smoking or using the toilet.

Storage: Store in a cool, dry area, away from incompatible materials (see Section 10).

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

<u>Ingredient</u>	<u>ACGIH TLV (8-hr. TWA)</u>	<u>U.S. OSHA PEL (8-hr. TWA)</u>	<u>Ontario (Canada) TWA_{EV}</u>	<u>UK OEL (8-hr. TWA)</u>
Ammonium Chloride	10 mg/m ³ (fume); 20 mg/m ³ STEL	10 mg/m ³ (fume); 20 mg/m ³ STEL	10 mg/m ³ ; 20 mg/m ³ STEV	10 mg/m ³ (fume); 20 mg/m ³ STEL
Zinc Chloride	1 mg/m ³ (fume); 2 mg/m ³ STEL	1 mg/m ³ (fume); 2 mg/m ³ STEL	1 mg/m ³ ; 2 mg/m ³ STEL	1 mg/m ³ (fume); 2 mg/m ³ STEL

STEV = Short Term Exposure Value STEL = Short Term Exposure Limit

Exposure Controls

Engineering Controls: Provide adequate ventilation/local exhaust to keep vapor concentrations below the exposure limits listed above.

Personal Protection: Workers must comply with the Personal Protective Equipment requirements of the workplace in which this product is handled. For operations requiring specific protection for mechanical hazards and heat protection refer to the appropriate occupational safety standard.

Eye/Face Protection: Wear eye/face protection (e.g. goggles/face shield) appropriate for the workplace where this material is handled and the conditions of use.

Skin Protection: Wear appropriate protective gloves and clean, body-covering clothing, when workplace conditions warrant their use.

Respiratory Protection: If ventilation and other engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protective equipment (RPE). Where occupational exposure limits are exceeded, workers must wear an approved respirator. In workplaces where respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. Consult with respirator manufacturer to determine respirator selection, use and limitations.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements, European Standard EN529 or Canadian Standards Association (CSA) Standard Z94.4-2002 must be followed whenever workplace conditions warrant a respirator's use.

General Hygiene Measures: Do not ingest. Avoid contact with skin and eyes. Keep out of reach of children. Wash hands after handling.

Section 9: Physical and Chemical Properties

Physical State:	Paste	Vapor Pressure (mm Hg @ 25°C):	<0.01 @ 68°F (20°C)
Appearance:	Tan	Vapor Density (Air = 1):	Not applicable
pH:	Not measurable	Volatile Organic Compounds (VOC) Content:	0% or (0g/L)
Relative Density (water = 1):	1.1	Solubility in Water:	Insoluble
Boiling Point:	Not applicable	Odor Type:	Low odor
Freezing Point:	Not applicable	Odor Threshold:	Not applicable
Viscosity:	Not applicable	Evaporation Rate (n-Butyl Acetate = 1):	Not applicable
Oxidizing Properties:	Not applicable	Auto Ignition Temperature (°C):	Not applicable
Flash Point and Method:	>204°C (400°F) TOC	Flammability Limits (%):	Not established



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Section 10: Stability and Reactivity

Chemical Stability:	Stable at normal room temperature.
Conditions to Avoid:	None known
Incompatible Materials:	None known
Hazardous Decomposition Products:	Toxic fumes of zinc, chloride and HCl may evolve during soldering.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.

Section 11: Toxicological Information

Toxicity Data:

Zinc Chloride:	Oral-Rat LD ₅₀ :	> 350 mg/kg (rat)
	Inhalation-Rat	LCLo Oral: 1960 mg/m ³ /10M
Ammonium Chloride:	Oral-Rat LD ₅₀ :	> 1650 mg/kg (rat)
	Inhalation-Rat	LC ₅₀ Oral: N/D
Petrolatum:	Oral-Rat LD ₅₀ :	N/D
	Inhalation-Rat	LC ₅₀ Oral: N/D

Chronic Toxicity Data

Carcinogenicity:	Normal use of this product will not result in exposure to any component that is considered a human carcinogen by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists, OSHA or NTP (National Toxicology Program).
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Section 12: Ecological Information

Ecotoxicity:	Zinc Chloride - 7.2 ppm/96hr/medium bluegill/TLm Ammonium Chloride - 6 ppm/96hr/sunfish/TLm
Persistence/Degradability:	None known
Bioaccumulation/Accumulation:	Product is not readily biodegradable.
Mobility:	Not applicable

Section 13: Disposal Considerations

Waste Disposal Method:	Do not discard into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage. The conditions of use, storage and disposal of this product are beyond our control and may be beyond our knowledge. The supplier does not assume responsibility and expressly disclaims liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.
USA:	Dispose of in accordance with local, state and federal laws and regulations.
Canada:	Dispose of in accordance with local, provincial and federal laws and regulations.
EU:	Waste must be disposed of in accordance with relevant EU Directives and national, regional and local environmental control regulations.

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR):	Not regulated
Canadian Transportation of Dangerous Goods (TDG):	Not regulated
ADR/RID:	Not regulated
IMDG:	Not regulated
Marine Pollutants:	Not applicable
ICAO/IATA:	Not regulated



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Section 15: Regulatory Information

USA	TSCA Status: All ingredients in the product are listed on the TSCA inventory.
	SARA Title III
	Sec. 302/304: None
	Sec. 311/312: Not applicable
	Sec. 313: Not applicable
	CERCLA RQ: Not applicable
	California Prop 65: This product is not known to contain chemicals known to the State of California to cause cancer or reproductive harm.
Canada	This product has been classified in accordance with the hazard criteria of the <i>Controlled Products Regulations</i> and the MSDS contains all the information required by the <i>Controlled Products Regulations</i> .
	WHMIS Classification: Not controlled
	DSL: All component substances are listed on Canada's Domestic Substances List (DSL).
EU Classification for the Substance/Preparation	
	Symbol: This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.
	Safety Phrases: S1/2: Keep locked up and out of the reach of children.

Section 16: Other Information

Full Text of R-phrases appearing in Section 3: R22: Harmful if swallowed
R36: Irritating to eyes

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. UTILITY urges the customers receiving this Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents, and contractors of the information on the sheets. The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, UTILITY cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified.



UTILITY
700 MAIN STREET, WESTBURY, NY 11590
(516) 997-6300 - FAX # (516) 997-6345

MATERIAL SAFETY DATA SHEET

PASTE SOLDERING FLUX

FOR CHEMICAL EMERGENCY: Spill, Leak, Fire, Exposure, or Accident - Call INFOTRAC - Day or Night: **1-800-535-5053**
THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD) IMPORTANT: Read this MSDS before handling & disposing of this product. Pass this information on to employees, customers and users of this product.

PRODUCT IDENTIFICATION

DOT Shipping name: CONSUMER COMMODITY, ORM-D CAS NO.: MIXTURE
Chemical Family: CHLORIDE UN/NA #:N/R
DOT Hazard Class: N/R DATE OF ISSUE: 11/06

SECTION I - HAZARDOUS INGREDIENTS/EXPOSURE LIMITS

Hazardous Ingredients:	CAS #	TLV/PEL	AGENCY	TYPE	SARA-313(% Range)
ZINC CHLORIDE	7646-85-7	1 MG/M3	ACGIH	TWA	10-25%
AMMONIUM CHLORIDE	12125-02-9	10 MG/M3	ACGIH	TWA	<10%

SECTION II - EMERGENCY AND FIRST AID PROCEDURES

WARNING: CORROSIVE

EYE CONTACT: If product is splashed into eyes, flush eyes with clean water for at least 15 minutes and seek medical attention.

SKIN CONTACT: Remove contaminated shoes and clothing and cleanse affected areas thoroughly by washing with mild soap and water and seek medical attention.

INHALATION: (breathing) Not expected to be a hazard under normal operating conditions..

INGESTION: (swallowing) If swallowed, seek emergency medical attention. Do not induce vomiting. Offer victim water or milk. Do not give diluents to someone who is unconscious or having trouble swallowing.

SECTION III - HEALTH HAZARDS / ROUTES OF ENTRY

EYE CONTACT: Eye contact with one or more components of this product can lead to conjunctivitis and corneal burns.

SKIN CONTACT: Contact with the skin can lead to severe burns or dermatitis and ulceration depending on duration of exposure.

SKIN ABSORPTION: Components of this product are not known to be skin absorbing agents.

INHALATION: (breathing) Not expected to be a hazard under normal operating conditions.

INGESTION: (swallowing) Ingestion can lead to stomach pains, nausea, vomiting, bloody diarrhea, edema, albuminuria, and shock.

SECTION IV - SPECIAL PROTECTION INFORMATION

VENTILATION: Use with adequate ventilation to maintain airborne concentrations below established exposure limits (see section I), Additional ventilation or exhaust systems may be required.

RESPIRATORY PROTECTION: None required under routine conditions of use. The use of respiratory protection is advised when concentrations exceed the established exposure limits (see Section I).

PROTECTIVE GLOVES: The use of gloves impermeable to the specific material handled is advised to prevent possible irritation.

EYE PROTECTION: Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended.

SECTION V - REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: (materials to avoid) This product is incompatible with: Oxidizing agents, strong acids and bases potassium, bromine pentafluoride, nitrogen trioxide, hydrogen cyanide, iodine pentafluoride and potassium chlorate.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition in the presence of air may yield carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION VI - SPILL OR LEAK PROCEDURES

PRECAUTIONS IN CASE OF LEAK OR SPILL: Keep all sources of ignition and hot metal surfaces away from spill/release. Stop spill/release if it can be done without risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Prevent spilled material from entering sewers, storm drains, and natural waterways Spilled material may be absorbed by an appropriate absorbent **WASTE DISPOSAL METHOD:** Dispose of product in accordance with local, county, state, and federal regulations.



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SECTION VII - STORAGE AND SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS: Avoid getting this product ON YOU or IN YOU. Wash hands after handling this product. Do not eat or drink while handling this product. Store product in properly labeled, closed containers. Always use this product in areas where adequate ventilation is provided.

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Extinguish with dry chemical, CO₂, or a universal type foam.

FIRE AND EXPLOSION HAZARD: May decompose during contact with flames, heating elements, or in combustion engines releasing irritating gases. Container may explode if heated due to resulting pressure rise.

FIRE FIGHTING PROCEDURES: Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section IV). Stop spill/release if it can be done without risk. Water spray may be useful in minimizing or dispersing vapors and cooling equipment exposed to heat and flame. Avoid spreading burning liquid with water used for cooling purposes.

SECTION IX - PHYSICAL DATA

APPROXIMATE BOILING POINT (DEG F): >200

SPECIFIC GRAVITY (68 F): >1

RELATIVE EVAPORATION RATE (ESTIMATED): <1

VAPOR PRESSURE @20C mmHg (CALCULATED): <1

PER CENT VOLATILE: NONE

FLASH POINT (TCC, DEG F): >300

PER CENT SOLUBILITY IN WATER: NEGLIGIBLE

SECTION X - OTHER REGULATORY DATA

SARA

SECTION 302: NONE
SECTION 311 & 312: ACUTE
SECTION 313: See Section II

HMS

Health: 1
 Flammability: 0
 Reactivity: 0

TSCA

All components are in full compliance with the TSCA inventory.

CALIFORNIA PROPOSITION 65

NOT LISTED

RCRA

Waste material would be a D002

CERCLA

ZINC CHLORIDE RQ: 1000 LBS.

CARCINOGENICITY:

NOT LISTED with NTP or IARC.

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.