



MATERIAL SAFETY DATA SHEET

CHROMATE INDUSTRIAL CORPORATION®
5250-A Naiman Parkway, Solon, OH 44139 • 888-567-2206 • www.chromate.com

**FOR CHEMICAL
EMERGENCY**

Call ChemTrec day/night:
1-800-424-9300

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 500 FLUX

DATE PREPARED: SEPTEMBER 5, 2012

PART NUMBER: 8787

CHROMATE INDUSTRIAL CORPORATION

CHEMICAL FAMILY: LIQUID SOLDERING FLUX

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SECTION 2 — COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS#	% RANGE	OSHA PEL mg/m ³		ACGIH-TLV mg/m ³		CARCINOGENICITY
			TWA	STEL	TWA	STEL	
Zinc Chloride (fume)	7646-85-7	< 30	1	2	1	2	EPA-D
Ammonium Chloride (fume)	12125-02-9	5-25	10	20	10	20	
Hydrochloric Acid (as Hydrogen Chloride)	7647-01-0	< 5	NE	7 ceiling	NE	7 ceiling	IARC-3
Methanol	67-56-1	< 5	260	325	262	skin 328	
Water	7732-18-5	Bal.	NE	NE	NE	NE	

SECTION 3 — HAZARD IDENTIFICATION

Hazard Rating: HMIS: (H=3 F=0 R=0 PE=D)

Emergency Overview: This product is a clear, colorless liquid, possessing a slight, sweet odor. This material is acidic and can irritate and burn the skin, eyes and any other contaminated tissue. This product is neither flammable nor reactive under normal circumstances; however, it may generate flammable hydrogen gas upon contact with metals. Emergency responders must wear the proper personal equipment suitable for the situation to which they are responding.

Symptoms of Over-Exposure by Route of Exposure: The most significant routes of over-exposure for this product are by contact with skin, eye contact, or inhalation of mists or sprays generated by this product. The symptoms of over-exposure to this product, by route of entry, are as follows:

Inhalation: If vapors, mists, or sprays of this product are inhaled, they can irritate and burn the nose, throat, and respiratory system. Symptoms of inhalation over-exposure may include sore throat, choking, coughing, and difficulty breathing. Prolonged or repeated over-exposure may cause burns and ulcers to the nose and throat, dental erosion, bronchitis, and stomach pains. It has been reported that a worker developed asthmatic symptoms after performing soldering work with a flux containing Ammonium and Zinc Chlorides (components of this product) vapors in high concentrations can cause blindness. Severe inhalation over-exposure may cause pulmonary edema (a life threatening accumulation of fluid in the lungs) or pneumonitis. Symptoms of pulmonary edema (e.g. shortness of breath, chest pains) can be delayed for several hours after exposure. Severe inhalation of vapors or fumes (as may occur if individuals are exposed in poorly ventilated areas, such as confined spaces) may be harmful.

Contact with Skin or Eyes: Depending on the duration and concentration of over-exposure, skin contact with this product can irritate and burn skin. Repeated or prolonged over-exposure to this product may result in dermatitis (red, dry, itchy skin) and ulceration. Depending on the duration and concentration of over-exposure, eye contact with this product can irritate and burn the eyes, Eye over-exposure can cause pain, tearing and redness. Severe eye over-exposure may cause blindness.

Skin Absorption: Methanol is readily absorbed through the skin. Because Methanol is a minor component of this product, skin absorption is not anticipated to be a significant route of over-exposure.

Ingestion: If this flux is ingested, nausea, vomiting, and diarrhea may occur (depending on the amount of product swallowed). Severe ingestion exposures may result in damage to the tissues of the gastrointestinal system, and death.

Injection: Though not anticipated to be a likely route of occupational exposure for this product, injection of this product (via punctures or lacerations by a contaminated object) may cause local reddening, tissue swelling, and discomfort.

SECTION 4 — FIRST AID MEASURES

Victims of chemical exposure must be taken for medical attention, if adverse health effects occur. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with victim.

Swallowing: Call physician or poison control center for most current information.

Swallowing continued: Do not induce vomiting, unless directed by medical personnel. Have victim rinse mouth with water, if conscious. If vomiting occurs, lean patient forward of place on left side to maintain as open airway and prevent aspiration.

Skin: Rinse affected area with a soap and water solution. If skin contact results in irritation, the minimum flushing is for 15 minutes. Victim must seek medical attention if adverse health effects occur.

Inhalation: Remove to fresh air. Call a physician.

Eyes: Flush with water for at least 15 minutes. Promptly get medical help if adverse health effects occur.

SECTION 5 — FIRE FIGHTING MEASURES

Flash Point (°F):	NA
Flammable Limits in air:	Lower : N/A Upper : N/A (% by volume)
Extinguishing media:	Does not support combustion. Be aware of other materials in surrounding area to determine if water, fog, foam or CO2 may be used.
Special fire fighting procedures:	This product is acidic and presents a contact hazard to firefighters. During a fire, irritating and toxic gases may be generated.
NFPA Rating:	Flammability 0, Health 3, Reactivity 0
Fire Extinguishing Materials:	This material is not flammable

SECTION 6 — SPILL AND LEAK RESPONSE

Steps to be taken if material is released or spilled:

Proper equipment should be used. In case of spill, clear the affected area, protect people and respond with trained personal Personnel should wear gloves, safety glasses and face shields during clean up.

In the event of a non-incident release, minimum personal protective equipment should be Level B: triple-gloves, chemical resistant suit and boots, hard hat, and self-contained breathing apparatus. Place all spilled residue in a suitable container and seal.

Dispose of in accordance with applicable U.S. Federal, State, or local procedures.

SECTION 7 — HANDLING AND STORAGE

Precautions to be taken in handling and storage:

Wash hands thoroughly after handling to remove all residue. Store material in sealed container.

Keep container tightly sealed when not in use. Store away from direct sunlight, sources of intense heat, or where freezing is possible.

Other precautions: Remove contaminated clothing immediately.

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits in Section 2. Exhaust directly to the outside, taking necessary precautions for environmental protection.

Respiratory Protection: Maintain airborne contaminant concentrations below guidelines listed in Section 2 if applicable. If respiratory protection is needed, U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Respiratory protection is recommended to be worn during welding operations.

Eye Protection: Safety glasses or goggles.

Hand Protection: Wear neoprene or rubber gloves for routine industrial use.

Body Protection: None needed for normal circumstances of use.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F @ 760 mmHg): NE Specific gravity: 1.32
Ph NA Solubility in water: Slightly soluble
Evaporation rate (butyl acetate=1) <1 Relative vapor density(air=1): 4.0
Appearance, odor and color: Product is clear, colorless liquid with a slight, sweet odor

SECTION 10 — STABILITY AND REACTIVITY

Stability: Stable

Decomposition Products: Carbon monoxide, carbon dioxide, hydrogen chloride, nitrogen and zinc oxides, and ammonia.

Materials with which Substance is incompatible: Strong oxidizers, acids, alkalis and their carbonates, hydrogen cyanide, interhalogens, ammonium nitrate, potassium chlorate, lead and silver salts.

Hazardous Polymerization: Will not occur

Conditions to avoid: Extreme temperatures, incompatible materials

SECTION 11 — DISPOSAL CONSIDERATIONS

Preparing wastes for disposal: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with regulations of Canada and its Provinces. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA Waste Number: D002 (Characteristic/Corrosivity), applicable to wastes consisting only of the product.

SECTION 12 — TRANSPORTATION INFORMATION

Proper shipping name: Corrosive liquids, n.o.s. (Zinc chloride, Hydrochloric Acid)

Hazard Class: 8 (Corrosive)

ID & Packing Group Number: UN 1760 III

DOT label(s) Required: Corrosive (Class 8)

Note: Consumer commodity shipments of the product 1-gallon or less in volume may be renamed "Consumer Commodity" and reclassified as ORM-D material. Refer to 49 CFR 173.154 © for additional information.

North American Emergency Response Guidebook Number (2000): 154

Marine Pollutant: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

Transport Canada Transportation of Dangerous Goods Regulation: This material is considered as dangerous goods, per regulations of Transport Canada. Use the above information for the preparation of Canadian shipments.

SECTION 13 — REGULATORY INFORMATION

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Section 302,304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

Chemical Name	SARA 302 (40 CFR 355 appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Ammonium Chloride	No	Yes	No
Hydrochloric Acid	No	Yes	Yes
Methanol	No	Yes	Yes
Zinc Chloride	No	Yes	Yes (as Zinc compound)

U.S. SARA Threshold Planning Quantity: There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirements filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20

U.S. CERCLA Reportable Quantity (RQ): Ammonium Chloride = 5000 lbs (2270 kg); Hydrochloric Acid = 5000 lbs (2270 kg); Methanal = 5000 lb (2270 kg); Zinc Chloride = 1000 lb (454 kg).

U.S. TSCA Inventory Status: The components of this product are listed on the TSCA inventory.