

# MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29CFR 1910.1200

Rev. 09/02/08

## SOLDER-MATE ELEVEN ZINC CHLORIDE BASE FLUX

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D.O.T. HAZARD CLASS-ZINC CHLORIDE SOLUTION, CLASS 8, CORROSIVE, UN1840, PGIII

### 1. PRODUCT INGREDIENTS

Chemical Name	CAS No.	Weight %	Permissible Air Concen.(mg/cu.m)		SARA Title III Sect.313Chem
			OSHA	ACGIH	
Zinc Chloride	7646-85-7	17%	1.0	1.0	YES

No other hazardous material is present in concentration greater than 1%(0.1% for carcinogens).

### 2. PHYSICAL DATA

Material is LIQUID	Appearance and Odor CLEAR LIQUID		
Melting Point N/A	Boiling Point 215°F	Specific Gravity 1.14	Vapor Density N/A
Solubility in Water FULLY SOLUBLE	Vapor Pressure N/A	Evaporation Rate N/A	PH VARIES WITH DILUTION

### 3. FIRE AND EXPLOSION DATA

Flash Point NON-FLAMMABLE	Flammable Limits N/A	Auto Ignition Temp. N/A
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Unusual Fire and Explosion Hazards  
MAY RELEASE ZINC OXIDE, ZINC CHLORIDE OR CHLORINE FUMES AND HYDROGEN CHLORIDE GAS.

Fire Extinguishing Agents Recommended  
USE CO2 OR DRY CHEMICAL ON SURROUNDING FIRE

Fire Extinguishing Agents to Avoid  
N/A

Special Fire Fighting Precautions  
USE NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS

NFPA RATING	2	0	0	HEALTH 2, FLAMMABILITY 0, REACTIVITY 0, SPECIAL 1
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#### **4. HEALTH HAZARD INFORMATION**

##### **CORROSIVE – EYE AND SKIN HAZARD**

###### **Primary Routes of Entry**

**INGESTION                    X INHALATION                    ABSORPTION**

###### **Carcinogenicity**

**THIS PRODUCT HAS NOT BEEN LISTED AS A SUSPECT CARCINOGEN BY NTP, IARC OR OSHA**

###### **Exposure(symptoms and effects)**

**INHALATION OF FUMES MAY CAUSE IRRITATION OR INJURY TO THE RESPIRATORY TRACT. INGESTION MAY CAUSE INJURY TO THE MOUTH AND DIGESTIVE TRACT. PROLONGED SKIN CONTACT WILL CAUSE IRRITATION AND INFLAMMATION. EYE CONTACT MAY RESULT IN DAMAGE TO TH EYE MEMBRANE.**

###### **First Aid Procedures**

**INHALATION: MOVE VICTIM TO FRESH AIR. SEEK MEDICAL ASSISTANCE IMMEDIATELY.  
SKIN CONTACT: WASH AFFECTED AREAS IMMEDIATELY WITH SOAP AND WATER. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.  
EYE CONTACT: FLUSH EYES WITH WATER FOR 15 MINUTES, CALL A PHYSICIAN.  
INGESTION: INGEST LARGE QUANTITIES OF WATER TO DILUTE, DO NOT INDUCE VOMITING. CALL A PHYSICIAN IMMEDIATELY.**

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#### **5. PRECAUTIONS/PROCEDURES**

**EMPTY CONTAINERS MAY CONTAIN RESIDUAL PRODUCT. USE PRECAUTION WHEN DISCARDING.**

###### **Spill or Leak**

**NEUTRALIZE WITH SODIUM BICARBONATE AND FLUSH WITH WATER TO AN APPROVED CHEMICAL SEWER OR CONTAINERIZE FOR PROPER DISPOSAL.**

###### **Personal Hygiene**

**AVOID INHALATION OR INGESTION. PRACTICE GOOD HOUSEKEEPING AND PERSONAL HYGIENE PROCEDURES. A SHOWER IS RECOMMENDED IF SIGNIFICANT DUST EXPOSURE OCCURS.**

###### **Engineering Controls**

**PROVIDE ADEQUATE MECHANICAL VENTILATION OR LOCAL EXHAUST TO MEET OSHA LIMITS. IT IS RECOMMENDED THAT A LOCAL EXHAUST BE USED TO REMOVE ZINC FUMES.**

###### **Storage**

**GENERAL STORAGE PROCEDURES ACCEPTABLE.**

###### **Special Precautions, Procedures, Label Instruction**

**MATERIAL IS NOT COMPATIBLE WITH STRONG ALKALIS OR OXIDIZERS, CYANIDES OR SULFIDES.**

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#### **6. PERSONAL PROTECTIVE EQUIPMENT**

###### **Respiratory Protection**

**IF FUMES EXCEED MINIMUM OSHA LIMITS, AN APPROVED RESPIRATOR IS RECOMMENDED.**

###### **Eyes and Face**

**SAFETY GLASSES OR GOGGLES ARE REQUIRED.**

###### **Other Clothing and Equipment**

**GLOVES AND OTHER PROTECTIVE CLOTHING RECOMMENDED TO PREVENT SKIN CONTACT.**

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## 7. REACTIVITY DATA

Stability: STABLE

Conditions To Avoid: NOT APPLICABLE

Incompatibility: STRONG OXIDIZERS MAY CAUSE VIOLENT REACTION.

Hazardous Decomposition Products: ZINC CHLORIDE FUME, HYDROGEN CHLORIDE AMMONIA, AMMONIUM CHLORIDE FUMES.

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## 8. ENVIRONMENTAL

Waste Disposal Method(DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS)

IF HAZARDOUS UNDER 40CFR 261, SUBPARTS B AND C, MATERIAL MUST BE TREATED OR DISPOSED IN A FACILITY MEETING THE REQUIREMENTS OF 40CFR 254 OR 265. IF NON-HAZARDOUS, MATERIAL SHOULD BE DISPOSED IN A FACILITY MEETING THE REQUIREMENTS OF 40CFR 257.

RCRA Status of Unused Material

IF DISCARDED IN UNALTERED FORM, MATERIAL SHOULD BE TESTED TO DETERMINE IF IT MUST BE CLASSIFIED AS A HAZARDOUS WASTE FOR DISPOSAL PURPOSES. UNDER SPECIFIC CIRCUMSTANCES, APPLICATION CAN BE MADE TO THE EPA ADMINISTRATOR TO HAVE A PARTICULAR WASTE DESIGNATED NON-HAZARDOUS.

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