

# Aluminum Flux

THERMADYNE

# VICTOR®

## MATERIAL SAFETY DATA SHEET

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This MSDS is based on air/fuel or oxy/fuel process.  
There may be other cautions for electric process.

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Form Number: 0056-1281  
Core Part No: 1440-0012

### Material Safety Data Sheet

## SECTION I - MATERIAL IDENTIFICATION

**Product Name:** Aluminum Flux (1440-0012)

**Product Use:** Brazing Flux

## SECTION II - HAZARDOUS INGREDIENTS

**OSHA Hazardous Components (29 CFR 1910.1200) EXPOSURE LIMITS: 8 HR. TWA**

	OSHA PEL	ACGIH TLV
Zinc chloride (fume) (CAS# 7646-85-7)	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
Lithium Chloride (CAS# 7447-41-8)		
Lithium Fluoride (CAS # 7789-85-7)	2.5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>

Remaining ingredients considered non-hazardous and trade secret.

## SECTION III - HAZARDS IDENTIFICATIONS

**EMERGENCY OVERVIEW:** Harmful if inhaled or swallowed. Causes eye irritation. Dust or vapor extremely irritating to eyes and respiratory tract. Powdered material may form explosive dust-air mixtures. Exposure to welding fumes can cause irritation of the eyes and respiratory tract.

### POTENTIAL HEALTH EFFECTS:

**INHALATION:** May cause delayed lung damage. Fumes and dust irritating to respiratory tract.

**EYE CONTACT:** Causes eye irritation. Fumes and dust irritating on contact.

**SKIN CONTACT:** Dermatitis. Possible chemical burns. Existing skin disorders may be aggravated.

**INGESTION:** Irritating to mouth, throat and stomach. Substance is harmful if swallowed. Large exposure may be fatal. May cause severe irritation, nausea, and vomiting.

**CHRONIC:** Repeated, excessive exposures may cause kidney effects. Coughing, erythema, nausea, and kidney effect.

**CARCINOGENICITY:** LISTED IN NTP? No IARC? No OSHA Regulated? No

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### SECTION IV - FIRST AID MEASURES

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- INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention. If exposed to fumes or vapors, flush eyes with large amounts of water for at least 15 minutes.
- SKIN CONTACT:** Remove contaminated clothing. Wash skin with soap and water. Get medical attention.
- INGESTION:** If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

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### SECTION V - FIRE FIGHTING MEASURES

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- Flashpoint (Method):** Non-flammable material.
- Flammable Limits:** Lower: NA Upper: NA
- Autoignition Temperature:** NA

- GENERAL HAZARD:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
- FIRE FIGHTING INSTRUCTIONS:** As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.
- EXTINGUISHING MEDIA:** Use extinguishing media for surrounding conditions.
- HAZARDOUS COMBUSTION PRODUCTS:** Smoke, oxides of carbon, hydrogen chloride, ammonium chloride, zinc oxide, zinc chloride and ammonia.

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### SECTION VI - ACCIDENTAL RELEASE MEASURES

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- LAND SPILL:** Vacuum or sweep up material and place in a disposal container. Do not flush to sewer. Collect scrap for remelting. Collect and place in chemical waste container for disposal.
- WATER SPILL:** Collect and place in chemical waste container for disposal.

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### SECTION VII - HANDLING AND STORAGE

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Wash thoroughly after handling. Use only in a well ventilated area. Follow all MSDS/label precautions even after container is emptied because they may retain product residues. Do not reuse this container. Avoid contact with eyes, skin, and clothing. Store in a cool dry place. Store in a tightly closed container.

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### SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

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**ENGINEERING CONTROLS:** Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

**PERSONAL PROTECTION:** If TLV exceeded, NIOSH approved fume respirator recommended.

**PROTECTIVE CLOTHING:** Wear chemical tight goggles and a face shield. Do not wear contact lenses.

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### SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

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<b>Vapor Pressure:</b>	NA	<b>Vapor Density (Air=1):</b>	NA
<b>Specific Gravity:</b>	2.16	<b>Evaporation Rate</b>	
<b>Solubility in Water:</b>	Appreciable	<b>(n-Butyl Acetate=1):</b>	NA
<b>pH:</b>	NA	<b>Freezing Point:</b>	NA
<b>Boiling Point:</b>	Decomposes		
<b>Appearance &amp; Odor:</b>	White powder with little or no odor.		

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### SECTION X - STABILITY AND REACTIVITY

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**GENERAL:** Stable

**INCOMPATIBLE MATERIALS:** Cyanides, sulfides, acids, bases (alkali)

**CONDITIONS TO AVOID:** Do not store unused, wet product. Slow evolution of flammable hydrogen gas may occur.

**HAZARDOUS POLYMERIZATION:** Will not occur.

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### SECTION XI - TOXICOLOGICAL INFORMATION

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Zinc chloride LD50: 31 mg/Kg (intraperitoneal, mice)

Zinc LD50: 15 mg/Kg (ip, mice)

Inorganic fluorides are generally highly irritating and toxic. Est. LD (man) = 2.5 to 5.9 g

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### SECTION XII - ECOLOGICAL INFORMATION

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Harmful to fish and other water organisms. Keep out of waterways.

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### SECTION XIII - DISPOSAL CONSIDERATIONS

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Classification required before disposal. Follow all federal, state, and local regulations.

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### SECTION XIV - TRANSPORTATION INFORMATION

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**PROPER SHIPPING NAME:** Corrosive Solids, N.O.S.  
**HAZARD CLASS:** 8  
**IDENTIFICATION NUMBER:** UN 1759, PGII  
**DOT Emergency Guide #:** #154  
**Reportable Quantity (RQ):** None

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### SECTION XV - REGULATORY INFORMATION

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**TSCA (Toxic Substance Control Act)** All components listed on TSCA inventory.

**CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):**  
None. We recommend that you contact local authorities for other reporting requirements.

**SARA TITLE III (Superfund Amendments and Reauthorization Act):**

311/312 Hazard Categories: Acute, chronic.

313 Reportable Ingredients: Zinc (fume and dust only) (40%), Zinc chloride(<15%).

This product contains the following toxic chemicals subject to the reporting requirements of EPCRA of 1986 and 40 CFR 372.

Zinc Chloride CAS# 7646-85-7 <15%

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### SECTION XVI - OTHER INFORMATION

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Hazards, as defined by OSHA 29 CFR 1910.1200, may result from fume or dust generated during brazing. The composition and quantity of both are dependent upon the metal being brazed and the procedures being used. Other conditions which influence the hazards associated with brazing include the filler material, the coatings on the metal, the number of people being exposed, and the quality of the ventilation. It is recommended that the composition of the fumes, gases, and dust to which the workers are exposed be classified by sampling the air in the worker's breathing zone and performing a hazard evaluation. See ANSI/AWS f1.1 available from the American Welding Society, P.O. Box 351040, Miami, FL 33135.

**PREPARED BY:** TALEM, Inc. - Technical Services Division (817) 335 - 1186

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#### FOOTNOTES:

NA - Not Applicable NE - Data Not Established CS - Cancer Suspect Agent OX - Oxidizer ND - No Data Cor - Corrosive  
CALC - Calculated EST - Estimated STEL - Short Term Exposure Limit TLV - Threshold Limit Value  
PEL - Permissible Exposure Limit TWA - Time Weighted Average, 8 hours

THE INFORMATION RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OWN PARTICULAR USE. NEITHER THE SELLER NOR PREPARER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE INFORMATION PRESENTED