



MATERIAL SAFETY DATA SHEET

Aladdin #1 Aluminum Soldering Flux

DATE REVISED: June 1, 2011

Distributed by: Aladdin Welding Products, Inc. 1300 Burton St. SE Grand Rapids, MI 49507	Ph: 616-243-2531 Fx: 616-243-9233 Website: www.aladdin3in1.com Email: welder@aladdin3in1.com
Manufactured by: Contact for Information	
Emergency Phone Number: 1-800-424-9300 (CHEMTREC)	

To the Purchaser: This MSDS contains important environmental, health, and toxicology information for your employees who have ordered this product. Please be sure this information is given to them. If you resell this product, a copy of the MSDS should be given to the buyer.

SECTION I - IDENTIFICATION

Common Name: Aladdin No. 1	Chemical Family: Aluminum Soldering Flux
CAS Number: NA	Chemical Name: NA
Formula: See Below	

SECTION II - COMPOSITION INFORMATION

This product, in its usual physical or natural state does not present an inhalation, ingestion, or contact hazard. When subjected to welding, burning, grinding, cutting, heat treatment, machining, abrasive blasting, or similar operations, potentially hazardous fumes or dusts may be emitted.

<u>Components</u>	<u>CAS Number</u>	<u>Sara III</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Aminoethylethanolamine	111-41-1	-----	N/E	Hazard: Corrosive
Ammonium Fluoborate	13826-83-0	<20%	2.5 mg/m ³ as F*	2.5 mg/m ³ as F*
Zinc Oxide	1314-13-2	<10%	5.0 mg/m ³	5.0 mg/m ³
Triethanolamine	102-71-6	-----	-----	5.0 mg/m ³
Stannous Fluoborate	13814-97-6	-----	2.5 mg/m ³ as F*	2.5 mg/m ³ as F*
Zinc Fluoborate	13826-88-5	-----	-----	2.5 mg/m ³ as F*

Remaining ingredients, if any, are non-hazardous and claimed as trade secret.

*Ammonium Fluoborate

- The PEL for fluoride as F is 2.5 mg/m³. Chronic fluoride absorption can result in osseous fluorosis, increased radiographic density of the bones and mottling of the teeth. Read OSHA 29 CFR 1910.1000, July 1, 1980, standard for fluorides.
- The PEL for boron oxide is: 10 mg/m³, B₂O₃ as a fume. This compound when used as intended will generate fumes of boron oxide. Contact your industrial hygiene department.

SECTION III - PHYSICAL AND CHEMICAL CHARACTERISTICS

N/E = Not Established

N/A = Not Applicable

Boiling Point(@ 760 mmHg): N/E	Specific Gravity (H₂O = 1 @ 72°F): 1.30
Solubility in Water: 0	Active temperature or range: Between 350°-550°F
Evaporation Rate (Butyl Acetate = 1): N/E	Percent Volatile by Volume: 8.6%
pH: 10-11	
Appearance and Odor: Viscous amber liquid with strong ammonia odor.	
Use: General purpose low temperature aluminum soldering flux.	



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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: >275°F

Flammable Limits in air %/Vol.: Lower 1.6 estimated Upper: 10.0 estimated

Extinguishing Media: Water, fog, foam, or dry chemical

Special Fire Fighting Procedures: Full protective equipment required. May release toxic ammonia, boron oxide, or fluoride fumes. Oxides of nitrogen.

Unusual Fire and Explosion Hazards: Avoid splashing this material and solutions of it onto personnel. Hydrofluoric acid solution may be formed within water runoff.

SECTION V - REACTIVITY HAZARD DATA

Stability: Stable

Conditions to avoid: Excessive heat, decomposes forming corrosive, skin penetrating, toxic gases.

Incompatibility (Materials to avoid): Cyanides, sulfides, strong oxidants

Hazardous Polymerization: Will not occur.

Hazardous Combustion or Decomposition Products: Toxic hydrofluoric acid, ammonia, and boron trifluoride.

SECTION VI – POTENTIAL HEALTH HAZARD DATA

Target Organ Statement: Danger: Causes severe burns to skin, eyes and respiratory system. Harmful if inhaled, swallowed, or absorbed through skin.

Effects of Chronic Exposure: Coughing, liver and kidney effects, nausea, erythema. Osseous fluorosis due to fluoride.

SECTION VII – EFFECTS OF ACUTE OVEREXPOSURE

Swallowing: Can cause damage to digestive system. Corrosive to mucous membranes. May cause salivation, nausea, vomiting, diarrhea, and abdominal pain. Fluoride ion can reduce serum calcium levels, possibly causing fatal hypocalcaemia. Systemic toxicity and shock. Do not aspirate into lungs.

Skin absorption/Contact: None currently known. Fumes may penetrate/adsorb into skin.

Inhalation: Highly irritating to respiratory system. Coughing and sneezing. Existing lung disorders will be aggravated. Inhalation may yield: chills, labored breathing, fevers, and unproductive cough. The fluoride ion may cause hypocalcaemia – calcium deficiency in the blood. Inflammation and necrosis of mucous membranes.

Eye Contact: Strong irritation to eyes, tearing, burn of eye surfaces, corrosive to eyes. May cause blindness.



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SECTION VIII - EMERGENCY AND FIRST AID PROCEDURES

Swallowing: Call a physician or Poison Control Center IMMEDIATELY; advise of chemical composition. (section II) and Potential Health Effects, (section VI). Corrosive to mucous membranes. May contain corrosive hydrofluoric acid solution.

Skin: Promptly flush with water to remove all residue. If a rash or burn develops, consult a physician. Product is corrosive. Hydrofluoric acid possible.

Inhalation: Terminate exposure and remove to fresh air. If fumes are inhaled, call physician immediately; Over inhalation may be harmful.

Eyes: Flush with water for at least 20 minutes to remove all residue. Get medical help NOW. Blindness can result. Hydrofluoric acid possible.

SECTION IX - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: If the workstation is not properly ventilated to exhaust all fumes and dusts, use a NIOSH approved mask for complete respiratory and eye protection.

Protective Gloves: Chemical and acid impervious.

Eye Protection: Chemical tight safety goggles. Do NOT wear contact lenses.

Ventilation: Maintain airflow away from user to remove all fumes and dusts, so that the PEL is never exceeded. Adhere to Environmental regulations for exhausts. Conform to applicable regulatory statutes.

Other: Full protective equipment normally used in soldering/applicable operations so as to prevent any contact.

EMERGENCY PHONE NUMBER * CALL CHEMTREC (800) 424-9300 * AVAILABLE 24 HOURS

SECTION X – STORAGE, HANDLING & SPECIAL PRECAUTIONS

Storage and Handling Precautions: Store flux at temperatures 35°F to 100°F, keep containers tightly closed and away from foodstuffs. Wash hands thoroughly after handling to remove all residue. No eating or smoking in work area.

Other Precautions: Do Not breathe fumes. Professionally wash contaminated clothing before re-use. Existing lung disorders will have increased toxic susceptibility.

SECTION XI – SPILL AND LEAK RESPONSE PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled: Contain, absorb, sweep up and dispose. Flush area to chemical sewer. Prevent direct contact to skin, eyes, and clothes.

Waste Disposal Method: Dispose of in accordance with all federal, state, and local regulations.



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SECTION X – TRANSPORTATION, DISPOSAL, & OTHER CONSIDERATIONS

D.O.T. Proper Shipping Name: Corrosive Liquid, NOS, (Aminoethylethanolamine, Ammonium Fluoborate)

Hazard Class: 8

Identification Number: UN1760

Packing Group: II

ERG Guide Number: 154

TOXIC SUBSTANCE CONTROL ACT: All components of this compound are listed within the TSCA inventory.

Hazardous Communications Program: Hazardous warnings and training requirements as mandated for corrosive material.

SARA Title III Program: This product contains the following toxic chemicals subject to the reporting requirements of EPCRA of 1986 and 40 CFR 372:

<u>Chemical Name</u>	<u>CAS No.</u>	<u>Concentration</u>
Zinc Compounds	7646-85-7	<10%
Ammonium Fluoborate	13826-83-0	<20%

*This information must be included in all MSDS that are copied and distributed for this material.

CERCLA: The following components of the product and their respective RQs are listed in 40 CFR 302:

Ammonium Fluoborate 13826-83-0 RQ = 5000 lbs.

STATE RIGHT TO KNOW PROGRAMS:

Pennsylvania: The following chemicals are listed in PA code Title 34, Hazardous Substance List: Aminoethylethanolamine, Ammonium Fluorbate, Zinc Oxide, Triethanolamine, Zinc Fluoborate.

California: This material contains no compounds subject to the reporting and/or labeling requirements of Proposition 65.

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