

SAFETY DATA SHEET

SDS Name: SolderWeld, Inc. Multi Sol Liquid Flux for Soldering 350°F TO 550°F

SDS Number: 103

GHS SDS Date: 03/06/2016

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SECTION I: PRODUCT AND COMPANY INFORMATION

Product Name: Multi Sol LIQUID Flux for Multi Metal Soldering 350°F TO 550°F

CAS Number:

Component	CAS Number	Component	CAS Number
Aminoethylethanolamine	111-41-1	Ammonium Fluoroborate	13826-83-0
Zinc Oxide	1314-13-2	Triethanolamine	102-71-6
Stannous Fluoroborate	13814-97-6	Zinc Fluoroborate	13826-88-5

Company Identification: SolderWeld, Inc. 2050 N 300 W #72 Spanish Fork, UT 84660 USA

Contact: Telephone: 1-800-356-8449, email: info@solderweld.com

SECTION II: HAZARD INFORMATION**Classification of the mixture according to Regulation (EC) No. 1272/2008**

GHS05 Corrosion Eye Damage

H318 - Causes serious eye damage



GHS07 Skin Irritation

H302 – Harmful if swallowed.

H315 - Causes skin irritation.



GHS08 Health Hazard

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Label Elements according to Regulation (EC) No. 1272/2008

Hazard Pictograms:



GHS05



GHS07



GHS08

Signal Word: **DANGER**

Hazard-determining components of labeling:

Aminoethylethanolamine, Zinc Oxide, Ammonium Fluoborate, Triethanolamine, Stannous Fluoborate, Zinc Fluoborate

Hazard Statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements:

P220 - Wear protective gloves, clothing, eye, face, and respiratory protection.

P260 - Do not breathe dust/fumes.

P264 - Wash thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P305+P351+P338 – IF IN EYES: Flush with water for at least 15 minutes to remove irritant. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician immediately.

P304+P341 – IF INHALED: Terminate exposure and remove to fresh air. Call physician; advise of

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chemical composition (section III).

- P302+P352 IF ON SKIN: Wash thoroughly with soap and water to remove any residue. If a rash develops, call a physician.
- P301 + P310 IF SWALLOWED: Call a physician or Poison Control Center IMMEDIATELY; Advise of chemical composition. (Section III) and Potential Health Effects, (section VIII). Corrosive to mucous membranes. May contain corrosive hydrofluoric acid solution.
- P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards:

PBT: Does not meet criteria for persistent – bio cumulative – toxic.

vPvB: Does not meet criteria for very persistent – very bio cumulative.

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 III: COMPOSITION / INGREDIENTS

*(Hazardous components 1% or greater; Carcinogens 0.1% or greater)

COMPONENT	CAS NO.	SARA III	OSHA PEL	ACGIH TLV
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	10 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*

NA = Not Applicable NE = Not Established NAIF = No Applicable Information found

***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 IV: FIRST AID MEASURES

- Ingestion:** Call a physical or Poison Control Center IMMEDIATELY; Advise of chemical composition. (Section III) and Potential Health Effects, (section VIII). Corrosive to mucous membranes. May contain corrosive hydrofluoric acid solution.
- Skin:** Promptly flush with water to remove any 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 any residue. Get medical help NOW. Blindness can result. Hydrofluoric acid possible.

SECTION V: FIRE FIGHTING MEASURES

- Flash point (°F):** > 275,
- Flammability Limits:** (in air, % by volume)
- LEL: 1.6 estimated
 - UEL: 10.0 estimated
- Extinguisher Media:** Water, fog, foam, or dry chemical

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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 VI: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is spilled or released:

- Contain, absorb, sweep-up, and dispose. Flush area to chemical sewer.
- Prevent direct contact to skin, eyes, and clothes.

SECTION VII: HANDLING AND STORAGE

Precautions to be taken in handling and storage:

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

Other Precaution / Special Handling:

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

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear protective gloves of Nitrile Rubber or Natural Rubber to protect hands and wrists.

Respiratory Protection: If the work station is not properly ventilated to exhaust all fumes and dusts, use NIOSH-approved breathing apparatus to prevent exposure to dusts and fumes.

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

Ventilation: Maintain air flow away from user to remove all fumes and vapors, 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. Review operations to avoid contact with hazardous gas, liquids or solids.

See also: 29 CFR 1910.132 - 29 CFR 1910.140. *Personal Protective Equipment*
29 CFR 1910.251 - 29 CFR 1910.257. *Welding, Cutting and Brazing***SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point (@ 760 mmHg):	N/E F°
Solubility in Water (100 = complete):	0
Evaporation Rate (Butyl Acetate = 1):	N/E
Active Temperature Range:	Active between 350 – 550 °F
Percent volatiles 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

SECTION X: STABILITY AND REACTIVITY

Stability: Stable

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

Incompatibility (materials to avoid): Cyanides, sulfides, strong oxidants.

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

SECTION XI: TOXICOLOGY INFORMATION

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.

Skin Absorption / Contact: None currently known. Fumes may penetrate / absorb into skin.

Inhalation: **Highly irritating to respiratory system.** Coughing & sneezing. Existing lung disorders will be

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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 surface, corrosive to eyes. May cause blindness.

*0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

	Health	Flammability	Reactivity	Special
NFPA Rating	2	1	1	0
HMIS Rating	2	1	1	0

SECTION XII: ECOLOGY INFORMATION**STATE RIGHT-TO-KNOW PROGRAMS:**

Pennsylvania: The following chemicals are listed in PA code Title 34, Hazardous Substance List: Aminoethylethanolamine, Ammonium fluoborate, Zinc Oxide, Triethanolamine, Zinc Fluoborate
California: This material contains no compounds subject to the reporting and/or labeling requirements of Proposition 65.

SECTION XIII: DISPOSAL CONSIDERATION

Waste Disposal Method

- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Disposal must be made according to official regulations. Dispose of according to federal, state, local, international, and OSHA regulations.

SECTION XIV: TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION: DOMESTIC GROUND
Proper shipping name: Corrosive Liquid, N.O.S.(Aminoethylethanolamine, Ammonium Fluoborate)
Hazard Class: 8
ID & Packing Group Number: UN 1760, PG II
ERG Guide Number: 154

SECTION XV: REGULATORY INFORMATION

TOXIC SUBSTANCE CONTROL ACT: All components of this compound are listed within the TSCA inventory. This Product is RoHS and REACH Compliant.

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.

CHEMICAL NAME	CAS NO.	CONCENTRATION
Zinc Compounds	7646-85-7	< 10%
Ammonium Fluoborate	13826-83-0	< 20%

*This information must be included in all SDS 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.

SECTION XVI: OTHER INFORMATION

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

**GOOD HOUSEKEEPING PROCEDURES SHOULD BE MAINTAINED.
PERSONNEL SHOULD WASH THOROUGHLY BEFORE SMOKING OR EATING
FOOD AND DRINK SHOULD NOT BE CONSUMED, TOBACCO PRODUCTS USED, OR COSMETICS**

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APPLIED IN AREAS WHERE EXPOSURES EXIST.

Please retain this sheet for your files. SolderWeld, Inc. maintains a file of Safety Data Sheets (SDS) for each rods and fluxes produced in compliance with Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) & various right-to-know laws.

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to SolderWeld, Inc. at the time of issue. It is our policy to include an SDS with initial orders for each product. This submission is to become a matter of record and need not accompany subsequent shipments for the same product to the same customer. The information contained on this sheet is intended solely for employee health and safety education and not for contract specification purposes. No warranty, guarantee, or representation is made by SolderWeld, Inc., nor does SolderWeld, Inc. assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances. Should you need additional information, contact us.