

Section 1 - Identification

Product Name: **ZCF™ Soldering Flux** Organic acid soldering flux. Revised: 4/28/15

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Section 2 - Hazards Identification

Hazard categories: Skin Corrosion/Irritation 1; Eye Corrosion/Irritation 2B
 Hazard statements: Causes severe skin burns and eye damage. May cause respiratory irritation.
 Signal word: Danger
 Pictogram: Corrosion

Precautionary statements

Prevention

Do not breathe dusts or mists.
 Wash hands thoroughly after handling.
 Wear protective gloves such as latex.
 Wear eye protection such as safety glasses with side shields.
 Use only outdoors or in a well-ventilated area.

**Response**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER for medical advice.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER.

Storage: Store locked up. Store in well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents in accordance with local, regional, national and international regulations.

Section 3 - Composition / Information on Ingredients

Ingredient	C.A.S. No.	Concentration
Water	7732-18-5	74%
2-aminoethanol hydrobromide	23382-12-9	25%

The remaining ingredients are not reportable as described in Appendix D to Sec. 1910.1200 Table D.1.

Section 4 - First Aid Measures

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing, lifting upper and lower eyelids occasionally. Immediately call a POISON CENTER.

Skin Contact: For contact with diluted product, wash the exposed skin with soap and water. With the concentrate or when redness or irritation are present, flush the exposed skin with running water. Remove contaminated clothing/shoes immediately. If redness, irritation or other symptoms exist after flushing, get medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes.

Inhalation: Move the affected person to fresh air. If irritation or other symptoms persist, get medical attention.

Ingestion: If the product is swallowed, do NOT induce vomiting. Vomiting will cause further damage to the throat. If the affected person is conscious, give a glass of water or milk to drink. Treat for shock by keeping the person warm and quiet. Get medical attention.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Any.

Special Fire Fighting Procedures: None.

Unusual Fire And Explosion Hazards: Contact with reactive metals will form hydrogen gas. Hydrogen bromide fumes may be released when heated in a fire.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Cover small spills with sodium carbonate (soda ash) or lime to neutralize. In some areas this may be flushed to a sanitary sewer with plenty of water. Check local regulations first. For larger spills, use adequate personal protective equipment and dike to prevent spreading. Then collect into clean pails or drums. Wash the area with an alkaline detergent or a 50% solution of soda ash.

Section 7 - Handling and Storage

Store away from alkalis, oxidizers and reactive metals in a cool, well ventilated area. Remove leaking containers. Empty containers retain product residue and may be hazardous. Observe all precautions given in this data sheet. If this product contacts bleach or a product containing bleach, it could produce a dangerous gas (chlorine).

Section 8 - Exposure Controls / Personal Protection

None of the ingredients have known exposure limits or they are below OSHA reportable levels.

Ventilation: Use mechanical exhaust to maintain airborne concentrations below the exposure limits.

Respiratory Protection: If the exposure limit will be exceeded or fumes are irritating during use, wear a NIOSH approved respirator with a cartridge approved for zinc chloride fumes.

Protective Gloves: Use rubber or latex gloves.

Eye Protection: Wear safety glasses with side shields or chemical goggles or face shield.

Other Protective Equipment: If splashing is likely to occur wear aprons, protective clothing or boots as the situation calls for.

Section 9 - Physical and Chemical Properties

Appearance and Odor: A violet liquid with an acidic odor.	
Odor Threshold: Not Available	Vapor Pressure: Not Available
pH: concentrate 1.0 ± 0.5 - 1:8 v/v dilution: 1.1 ± 0.5	Vapor Density: Not Available
Melting Point: Not Available	Relative Density (Specific Gravity): 1.19
Freezing Point: Not Available	Solubility(ies): Water: 100%
Boiling Point, Initial: 259° F.	Partition coefficient: Not Available
Boiling Range: Not Available	Auto-ignition Temperature: Not Available
Flash Point: None. (ASTM D-56 closed cup)	Decomposition Temperature: Not Available
Evaporation Rate: ~1 (Water = 1)	Viscosity: Same as water.-
Flammability: (solid, gas): Not Applicable	Volatiles Percent: >99%
Upper Explosive Limit: None	V.O.C.: 0% - 0 grams/liter
Lower Explosive Limit: None	

Section 10 - Stability and Reactivity

Incompatibility: Alkalis, bleach, oxidizers, reactive metals.

Hazardous Decomposition Products: None

Section 11 - Toxicological Information

Primary Routes of Entry: Skin contact; Skin absorption; Inhalation; Ingestion

Potential Health Effects:

Eyes - concentrate causes damage and may cause blindness with prolonged contact. Dilutions cause severe irritation and may cause damage with prolonged contact.

Skin - concentrate causes severe irritation and burns with prolonged contact. Dilutions cause irritation, redness at first and with continued contact possibly damage. Repeated contact may cause dermatitis.

Swallowing - concentrate causes damage to mucous membranes. Dilutions cause severe irritation or damage.

Breathing - excessive inhalation of soldering fumes causes irritation of the mouth, nose, throat and respiratory passages.

In laboratory rats 2-hydroxyethylamine has been suggested as a cause of kidney abnormalities.

Section 12 - Ecological Information

Do not dispose of in the environment.

Section 13 - Disposal Considerations

Waste Disposal Method: Up to one-half gallon may be washed to the sanitary sewer with a large amount of water. Larger amounts should be neutralized to within pH limits of your waste water system and then disposed of in the sanitary sewer.

Section 14 - Transport Information

D.O.T. Hazard Class:

UN3264, Corrosive liquid, acidic, inorganic, n.o.s., 8, PG III (Contains 2-aminoethanol hydrobromide)

Section 15 - Regulatory Information

The components of this product are on the TSCA inventory of chemical substances.

Section 16 - Other Information

NFPA: H:3 F:0 I:1 **HMIS® III:** H:3 F:0 P:1 These ratings estimates are to be used only with a fully implemented training program in the workplace. NFPA® is a mark registered by the NFPA. HMIS® is a mark registered by the NPCA.

Replaces sheet dated 5/7/09. GHS conversion.

The information accumulated herein is believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.