MATERIAL SAFETY DATA SHEET

PLEASE CAREFULLY READ AND UNDERSTAND THIS MATERIAL SAFETY DATA SHEET BEFORE USING THIS PRODUCT

For Welding Consumables and Related Products

May be used to comply with OSHA's Hazards Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

SECTION I (IDENTIFICATION)

Manufacturer/Supplier Name: UNIWELD PRODUCTS, INC. Emergency Phone No.: (954) 584-2000
2850 Ravenswood Road
Fort Lauderdale, FL 33312
Product Name(s): **UNI-4300 FLUX**
Product Classification: **ALUMINUM SOLDERING FLUX**

SECTION II (HAZARDOUS INGREDIENTS/IDENTITY INFORMATION)

Important: This section covers the materials from which these products are manufactured. The fumes and gases produced during normal use of these products are covered by Section V. The term "Hazardous Materials" should be interpreted as a term required and defined in OSHA Hazard Communication Standard 26 CFR 1910.1200 and it does not necessarily imply the existence of hazard.

INGREDIENT	% WEIGHT	CAS NO.	EXPOSURE LIMIT (mg/m^3)	
			OSHA PEL	ACGIH TLV
AMINOETHYLETHANOLAMINE	N/A	111-41-1	N/E	N/A
AMMONIUM FLUOBORATE	N/A	13826-83-0	See Below*	N/A
ZINC OXIDE	N/A	1314-13-2	5.0 mg/m^3	N/A
TRIETHANOLAMINE	N/A	102-71-6	N/E	N/A

*Ammonium Fluoborate: 1. The PEL for fluoride as F is 2.5 mg/m^3. 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.

2. The PEL for boron oxide is 10 mg/m^3, B_2O_3 as a fume. This compound when used as intended will generate fumes of boron oxide. Contact your industrial hygiene department.

SECTION III (PHYSICAL DATA)

Boiling Point: °F @ 760 mmHg: N/A
Solubility in water: =100 - complete
Evaporation rate (Butyl Acetate = 1): N/A
Specific Gravity (H_2O = 1 @ 72°F): 1.30
Melting temperature or range: Active between 350 - 550°F
Percent volatiles by volume: N/A
Appearance and odor: Viscous amber liquid with strong ammonia odor
Use: General purpose low temperature aluminum soldering flux

SECTION IV (FIRE AND EXPLOSION HAZARD DATA)

Flash Point (°F): >275
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
Flammable limits In air % / volume: Lower: 1.6 estimated Upper: 10.0 estimated
Unusual fire and explosion hazard: Avoid splashing this material and solutions of it onto personnel. Hydrofluoric acid solution may be formed within water runoff.

SECTION V (REACTIVITY DATA)

Stability: Stable
Incompatibility (material to avoid): Cyanides, sulfides, strong oxidants
Conditions to avoid: Excessive heat: decomposes forming corrosive, skin penetrating, and toxic gases.
Hazardous Polymerization: Will not occur.
Hazardous combustion or decomposition products: Toxic hydrofluoric acid, ammonia, and boron trifluoride are expected.

SECTION VI (HEALTH HAZARD DATA)

EMERGENCY AND FIRST AID PROCEDURES: Swallowing: Call a physician or your local poison control center at once. Advise of chemical composition. Skin: Wash thoroughly with water to remove all residue. Inhalation: Remove victim to fresh air. If fumes or vapors are inhaled, call physician. Eyes: Flush with water for 15 minutes. Call a physician.

EFFECTS OF ACUTE OVEREXPOSURE:

Swallowing: May be fatal if ingested. Can cause severe damage to digestive system, shock, vasomotor depression, and poisoning.
Skin absorption: None currently known.
Inhalation: Irritation to respiratory system. Ammonia vapors may damage lungs. Preexisting lung disorders will be aggravated.
Skin contact: Dermatitis, possibly a chemical burn. Preexisting skin disorders will be aggravated.
Eye contact: Irritation to eyes and burn of eye surface.
NOTE: Chronic fluoride absorption can result in osseous fluorosis. Increased radiographic density of the bones and mottling of teeth. This mixture includes compounds which contain boron oxide (B_2O_3). When used as intended, fumes of boron oxide will be given off which are hazardous. Causes skin and eye burns. Harmful if inhaled or absorbed through skin.
Chronic effects: Coughing, CNS effects, erythema, nausea.

WARNING: DO NOT BREATHE FUMES !

WARNING: CALIFORNIA PROPOSITION 65: This product, when used for welding, soldering, brazing, cutting and other metal working or flame processes, produces fumes, particulates, residues and other by-products which contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

SECTION VII (PRECAUTIONS FOR SAFE HANDLING AND USE/APPLICABLE CONTROL MEASURES)

Read and understand the manufacturer's instructions and the precautionary label on the product. (See American National Standard Z-49.1, "Safety in Welding and Cutting," published by the American Welding Society, P.O. Box 351040, Miami, FL

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▽ **WARNING: DO NOT BREATHE FUMES!**

RESPIRATORY PROTECTION: If the work station is not ventilated to remove all dust and fumes, use NIOSH approved mask.

EYE PROTECTION: Chemical-Safety goggles.

PROTECTIVE CLOTHING: Chemical - Impervious gloves.

VENTILATION: Maintain air flow away from user to exhaust all dusts and fumes so that the PEL is never exceeded.

OTHER PROTECTIVE EQUIPMENT: Full protective equipment used in soldering operations so as to prevent any contact.

PROCEDURE FOR CLEANUP OF SPILLS OR LEAKS: Contain spillage, absorb, sweep-up, dispose, Flush area with water to chemical sewer.

WASTE DISPOSAL: Dispose of in accordance with all Federal, State and Local regulations.

SPECIAL PRECAUTIONS: IMPORTANT. MAINTAIN EXPOSURE BELOW PEL/TLV. USE INDUSTRIAL HYGIENE MONITORING TO ENSURE THAT YOUR USE OF THIS MATERIAL DOES NOT CREATE EXPOSURES WHICH EXCEED PEL/TLV. Always use exhaust ventilation. Refer to the following sources for important additional information: ANSI Z-49.1. The American Welding Society, P.O. Box 351040, Miami FL 33135: OSHA (29 CFR 1910), US Dept. of Labor, Washington, DC 20210.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep containers away from excessive heat.

Uniweld Products, Inc. believes this data to be accurate and to reflect qualified expert opinion regarding current research. Uniweld Products, Inc. cannot make any expressed or implied warranty as to this information.