

**SAFETY DATA SHEET SDS Date: 10/14/2014**

MSDS Name: High Temperature Solder for Casted Aluminum and White Metals

MSDS Number: UNIWELED 4200

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SECTION I: PRODUCT AND COMPANY INFORMATION

Product Name: High Temperature Solder for Casted Aluminum and White Metals

CAS Number:

COMPONENT	CAS NO.	COMPONENT	CAS NO.
Zinc (Zn)	7440-66-6	Copper (Cu)	7440-50-8
Aluminum (Al)	7429-90-5	Magnesium (Mg)	7439-95-4

Company Identification: UNIWELED PRODUCTS, INC., 2850 RAVENWOOD RD., FT. LAUDERDALE, FL 33312

Contact: CHEMTREC Day or Night within USA and Canada: 1-800-424-9300 CCN23404, or +1 703-527-3887 (collect calls accepted)

SECTION II: HAZARD INFORMATION**PRIMARY ROUTES OF ENTRY**

- Inhalation: fumes
- Ingestion: Solid metals – not edible; highly unlikely
- Skin Absorption: N/A

SIGNS AND SYMPTOMS OF OVEREXPOSURE

- Flu-like symptoms (nausea, constipation, headache, dizziness) - self-limiting, usually disappear within 24 hours

SECTION III: COMPOSITION / INGREDIENTS

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

Component	CAS Number	OSHA PEL	ACGIH TLV	Other	% (optional)
Zinc (Zn)	7440-66-6	5mg/m ³ (oxide & fume)	5mg/m ³ (oxide & fume)	STEL of 10.0 mg/m ³	-----
Aluminum (Al)	7429-90-5	10 mg/m ³	-----	-----	-----
Copper (Cu)	7440-50-8	2 mg/m ³	-----	-----	-----
Magnesium (Mg)	7439-95-4	negligible> see %	-----	-----	-----

PEL = Permissible Exposure Limit; TLV = Threshold Limit Value; NA = Not Applicable; NE = Not Established

SECTION IV: FIRST AID MEASURES

Ingestion: Drink large quantities of water - induce vomiting.
Call a physician at once; advise of chemical composition (section III).

Skin: Wash thoroughly with water to remove any residue. If a rash develops, call a physician.

Inhalation: Terminate exposure and remove to fresh air. Call physician; advise of chemical composition (section III).

Eyes: Flush with water for at least 15 minutes to remove irritant. Consult a physician.

SECTION V: FIRE FIGHTING MEASURES

Flash point & Methods Used: N/A; Auto Ignition Temperature: N/A

Flammability Limits: (in air, % by volume) LEL: N/A and UEL: N/A

Extinguisher Media: CO₂ or dry chemical extinguisher.

**DO NOT USE WATER ON MOLTEN METAL:
LARGE FIRES MAY BE FLOODED WITH WATER FROM A DISTANCE**

Special Fire Fighting Procedures Use NIOSH/MSHA -approved self-contained breathing apparatus and full protective clothing if involved in fire.

Unusual Fire and Explosion Hazards Finely divided dust may form explosive mixture with air.



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NEVER DROP WATER OR LIQUIDS INTO MOLTEN SOLDER.
***Do not plunge damp or wet solder bars/pieces into molten solder**
Flame will trace fine zinc dust. Product of combustion is ZnO

SECTION VI: ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is spilled or released:

- Solder is solid / recyclable
- Vacuuming is recommended for accumulated metal dust from saw/grind operations.

SECTION VII: HANDLING AND STORAGE

Precautions to be taken in handling and storage:

- Dry storage; ambient temperature

Other Precaution / Special Handling:

- **Wet or moist ingot(s) WILL present an explosion hazard when submerged in molten solder.**
***AVOID FIRE/EXPLOSION RISKS. Always preheat ingot before charging into furnace.**

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Use NIOSH-approved breathing apparatus to prevent exposure to dusts and fumes.

Eye Protection: Approved safety glasses or welding goggles, appropriate to your procedure, should be worn.

Ventilation: Local Exhaust: YES Mechanical: YES Special: Conform to your regulatory statutes.

Other: Standard protective equipment used in soldering (/applicable) operations.

*Protective gloves are recommended, especially for high temperature applications to prevent burns.

*Conform to all local, state, federal regulations.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	2400 ^o F / 1314 ^o C
Melting Point:	728 ^o F / 387 ^o C
Vapor Pressure (mm Hg.):	N/A
Vapor Density (AIR = 1):	N/A
Specific Gravity:	6.68
Solubility in Water:	0 (solid)
Evaporation Rate (Butyl Acetate = 1):	N/A
Appearance and Odor:	Silver-white-bluish metal; odorless / various shapes and sizes.

SECTION X: STABILITY AND REACTIVITY

Stability:	Stable
Conditions to avoid:	None
Incompatibility (materials to avoid):	Strong Acids, Strong Alkalis
Hazardous Decomposition Products:	None; Hazardous Polymerization will not occur

SECTION XI: TOXICOLOGY INFORMATION

Zinc (Zn):	Excessive inhalation of zinc oxide fumes may produce symptoms known as “zinc shakes” which are flu-like and usually cease when the individual is removed from the source.
Copper (Cu):	Excessive inhalation of fumes from many metals can produce an acute reaction known as “metal fume fever”. Symptoms consist of chills and fever which come on a few hours after a large exposure. Long-term effects of metal fume fever have not been noted. PHYSIOLOGICAL EFFECTS: Industrial exposure to copper fumes, dusts, or mists results in metal fume fever with atrophic changes in nasal mucous membranes. Chronic poisoning results in Wilson’s disease, characterized by a hepatic cirrhosis, brain damage, demyelination, renal disease, and copper deposition in the cornea.
Aluminum (Al):	Inhalation of finely divided powder has been reported as a cause of pulmonary fibrosis. May be implicated in Alzheimer’s disease.

***NOTE: IT IS UNLIKELY THAT NORMAL EXPOSURE (USING APPROPRIATE PROTECTIVE EQUIPMENT) TO THIS SOLDER WOULD RESULT IN ILLNESS.**

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*0 = Insignificant	1 = Slight	2 = Moderate	3 = High	4 = Extreme
	Health	Flammability	Reactivity	Special
NFPA Rating	1	0	0	0
HMIS Rating	1	0	0	0

SECTION XII: ECOLOGY INFORMATION

This product will not biodegrade. It will oxidize if left out in the elements, but will not affect the surrounding ecology.

SECTION XIII: DISPOSAL CONSIDERATION

Waste Disposal Method

- Dispose of according to federal, state, local, and OSHA regulations.

SECTION XIV: TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION

Proper shipping name: Solder alloy - NOT REGULATED
Hazard Class: NAIF
ID & Packing Group Number: NAIF
ERG Guide Number: NAIF

SECTION XV: REGULATORY INFORMATION

SARA Title III Program:

- This product contains no toxic chemicals subject to the reporting requirements of the Emergency Planning and Community Right to Know Act (EPCRA) of 1986 and 40 CFR 372

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
APPLIED IN AREAS WHERE EXPOSURES EXIST.**

Please retain this sheet for your files. UNIWELED maintains a file of Safety Data Sheets (SDS) for each alloy 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 UNIWELED PRODUCTS, 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 UNIWELED PRODUCTS, INC., nor does UNIWELED PRODUCTS, 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.