

MATERIAL SAFETY DATA SHEET

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

For Manufactured Welding Consumables and Related Products. May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200 and Superfund Amendments and Reauthorization Act (SARA) of 1986 Public Law 99-499. 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): **FLINT FOR LIGHTER**
Product Classification: **FLINT - FERROCERIUM**

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. The chemicals or compounds reportable by Section 313 of SARA are marked by the symbol #.

INGREDIENT	WEIGHT %	CAS NO.	EXPOSURE LIMIT (mg/m ³)	
			OSHA PEL	ACGIH TLV
RARE EARTH METALS/ MISCHMETAL		N/A	N/A	N/A
CERIUM		N/A	N/A	N/A
LANTHANUM	78	N/A	N/A	N/A
NEODYMIUM		N/A	N/A	N/A
PRASEODYMIUM		N/A	N/A	N/A
IRON (OXIDE FUME)	20	N/A	10	5
MAGNESIUM (OXIDE FUME)	2	N/A	15	10

SECTION III (PHYSICAL DATA)

Boiling Point: 6800°F
Melting Point: 2000°F
Vapor Pressure (mm Hg and Temperature): N/A
Vapor Density (AIR=1): N/A
Solubility in Water: Insoluble
Specific Gravity (H₂O=1): 6.35
Evaporation Rate: N/A
Water reactive: See note on water reactivity
Appearance and Odor: Cylindrical pellets, no odor

SECTION IV (FIRE AND EXPLOSION HAZARD DATA)

Flash Point & Method Used: None
Auto-ignition Temperature: 900°F
Flammability Limits in Air % by Volume: N/A
LEL: N/A
UEL: N/A
Extinguisher Media: Lighter flints do not burn
Special Fire Fighting Procedures: None
Unusual Fire & Explosion Hazards: See note on flammability of ferrocium in powder form

SECTION V (REACTIVITY DATA)

Stability: Stable
Conditions to avoid: See note on Water Reactivity - will dissolve in acid. Cerium is a strong reducing agent.
Incompatibility (Materials to avoid): Acids, strong oxidizers, strong bases, halogens, phosphorus, sulfur
Hazardous Decomposition Products: None
Hazardous Polymerization: Will not occur
Conditions to avoid: N/A

One recommended way to determine the composition and quantity of fumes to which workers are exposed is to take an air sample inside the welder's helmet. If worn, or in the worker's breathing zone. (See ANSI/AWS F1.1, available from the American Welding Society, P.O. Box 351040, Miami, FL 33135. Also from AWS is F1.3, "Evaluating Contaminants in the Welding Environment - A Sampling Strategy Guide," which gives additional advice on sampling.) At a minimum, materials listed in this section should be analyzed for the following:

SECTION VI (HEALTH HAZARD DATA)

Primary routes of entry: Inhalation
Carcinogen listed in: Not Listed
Health Hazards (Acute): See note on Health Hazards associated with Rare Earth Metals and Magnesium

Signs and Symptoms of exposure

Medical Conditions Generally Aggravated by Exposure: None Known
Emergency First Aid Procedures - Seek medical assistance for further treatment, observation and support if necessary.
Eye Contact: Remove particles from eye and flush with large amounts of water. May cause irritation due to abrasion.
Skin Contact: Wash with soap and water. Remove contaminated clothing and launder. May cause irritation due to abrasion.
Inhalation: Remove victim from fumes and seek medical attention. Inhalation of material in powder form may cause irritation.
Ingestion: Give one or two glasses of milk. Seek immediate medical aid. No adverse effects expected under normal usage.

▽ **WARNING: DO NOT BREATHE FUMES OR DUST!**

MISCHMETAL

Health Hazards (Acute and Chronic): Chronic exposure to mischmetal may decrease the coagulatory properties of the blood and, therefore, can delay blood clotting and hemorrhaging may result. Cerium may cause polycythemia (overabundance of red blood cells). Acute exposure may yield flu-type symptoms several hours after exposure.

Carcinogenicity: NTP? LARC Monograph? OSHA Regulations? Mischmetal and individual components have not been

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identified as known or suspected carcinogens by NTP, LARC or OSHA.

Signs and symptoms of Exposure: Flu-type symptoms consisting of chills and fever occurring several hours later. Rare Earth metal fumes affect the central nervous system similar to that of an extensive welding operation.

MAGNESIUM

Health Hazards (Acute and Chronic): Chronic exposure to magnesium or oxide dust should be a low health risk by inhalation and should be treated as nuisance dust. Exposure to magnesium and oxide fume dust burning can result in metal fume fever similar to but milder than that induced by zinc oxide fumes.

Carcinogenicity: NTP? LARC Monograph? OSHA Regulations? Magnesium has not been identified as a known or suspected carcinogen.

Signs and Symptoms of Exposure: Temporary symptoms can include fever, chills, nausea, vomiting and muscular pain. Onset of symptoms occur 4-12 hours after exposure and is usually complete in 24-48 hours. Meeting exposure limits in Section II should prevent fume fever from occurring.

ZINC

Health Hazards (Acute and Chronic): Chronic exposure to zinc or oxide dust may cause irritation to eyes, nose and throat; metallic taste in mouth; metal fume fever or produce flu-like symptoms.

Carcinogenicity: NTP? LARC Monograph? OSHA Regulations? Zinc has not been identified as a known or suspected carcinogen.

Signs and symptoms of Exposure: Flu-Type symptoms consisting of fever, chills, nausea, vomiting and muscular pain. Prevention by meeting exposure limits in section II is easily attained.

▽ **WARNING: DO NOT BREATHE FUMES OR DUST!**

▽ **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)

The information and recommendations contained herein are offered for the user's consideration and examination and it is the user's responsibility to satisfy him/herself that they are suitable and complete for his/her particular use. Uniweld Products, Inc. Does not warrant or guarantee the accuracy or reliability of the information and recommendation herein and shall not be liable for any loss or damage arising out of the use thereof.

Flammability of Ferrocium in Powder Form: Ferrocium is flammable in powder form as are most metals, i.e. Aluminum and Magnesium. Ferrocium in pellet form is not flammable and although, in fact, the auto ignition point is specified by the manufacturer of the Ferrocium to be 900°F, these pellets have been subjected to 1700°F over a prolonged period of time without flammability or deterioration.

Water reactivity of Ferrocium: Ferrocium pellets will degenerate into powder over an extended period of time, usually measured in years. The presence of moisture accelerates this deterioration. The pellets are coated with a moisture resistant lacquer to extend shelf life. It is recommended that Ferrocium pellets be disposed of if they show signs of deterioration as the resulting powder is flammable.

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.