



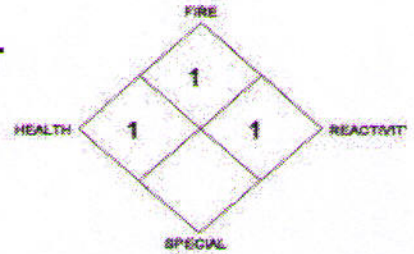
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24 Hour Response
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MATERIAL SAFETY DATA SHEET

NFPA HAZARD RATING

- 4 EXTREME
- 3 HIGH
- 2 MODERATE
- 1 SLIGHT
- 0 INSIGNIFICANT



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PRODUCT FAMILY: CADWELD® ALUMINUM WELDING MATERIAL
PRODUCTS INCLUDED: MATERIAL TYPE A22

DATE PREPARED: 3/8/90

REVISED: 3/03/04

MSDS: 234L

1. INGREDIENTS

INGREDIENTS	CAS #	EXPOSURE LIMITS (mg/m ³)		ACGIH TLV	WEIGHT PERCENT	TSCA INV.
		OSHA PEL				
TIN OXIDE	18282-10-5	2.0		-----	NOT > 45	YES
ALUMINUM	7429-90-5	TOTAL DUST 15.0 RESPIRABLE FRACTION 5.0		DUST 10.0 FUME 5.0	NOT > 45 FUME OR DUST)	YES
COPPER OXIDE	1317-39-1	DUST 1.0 FUME 0.1		DUST 1.0 FUME 0.2	NOT > 15	YES
CALCIUM FLUORIDE	7789-75-5	2.5 AS FLUORIDE		2.5 AS FLUORIDE	NOT > 5	YES

2. PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: N/A
 VAPOR PRESSURE: N/A
 VAPOR DENSITY: N/A
 SOLUBILITY IN WATER: Insoluble, 0
 SPECIFIC GRAVITY (H₂O=1): 5
 MELTING POINT: @ 250°C (482°F)
 EVAPORATION RATE (BUTYL ACETATE=1): N/A
 APPEARANCE AND ODOR: Silvery-white powder; Odorless

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3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): Self ignites above 899°C (1650°F) (Indirect Heating).

FLAMMABLE LIMITS: LEL - N/A UEL - N/A

EXTINGUISHING MEDIA: None

SPECIAL FIRE FIGHTING PROCEDURES: Water application should be at a reasonable distance. Use of hand water buckets or hand storage pumps is not recommended.

UNUSUAL FIRE AND EXPLOSION HAZARD: Material suspended in dust-laden air cloud may ignite at lower than normal ignition temperature.

4. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Temperature above ignition.

INCOMPATIBILITY (MATERIALS TO AVOID): Will react with moisture, mineral acids, halogenated compounds, and harsh alkalis. Avoid exposure to open flames or other possible ignition sources.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: None

HAZARDOUS POLYMERIZATION: Will not occur.

5. HEALTH HAZARD DATA

ROUTES OF ENTRY: Primary route of entry - Inhalation.

HEALTH HAZARDS: Burns from contact with reaction or reaction products. Dust and fumes are irritants to eyes and upper respiratory tract.

CARCINOGENICITY: NTP - No IARC MONOGRAPHS - No OSHA REGULATED - No
SIGNS/SYMPTOMS OF EXPOSURE: (See Health Hazards)

EMERGENCY AND FIRST AID PROCEDURES: Standard treatment for burns. For inhalation of dust, fume, remove from exposure, provide fresh air, flush eyes with water, consult physician.

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6. PRECAUTIONS FOR SAFE HANDLING AND USE

ACTION TO TAKE FOR SPILLS/LEAKS: All unused, spilled materials may be swept up for disposal using soft, dry sponge or soft natural fiber brush, and non-sparking conductive scoop. Avoid actions that would cause material to disperse in air.

WASTE DISPOSAL METHOD: Contact factory for assistance or dispose of in accordance with Federal, State, and Local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Materials should be kept dry and stored in "NO SMOKING OR OPEN FLAME" area. Restriction to authorized personnel is recommended.

7. CONTROL MEASURES

RESPIRATORY PROTECTION: Where TLV is exceeded, use NIOSH approved particulate respirator.

VENTILATION: Local Exhaust - Use only when TLV is exceeded. Mechanical - Must be specifically approved for use with reactive, combustible dust.

PROTECTIVE GLOVES: Recommended for handling hot equipment.

EYE PROTECTION: Safety glasses recommended and caution to user to avoid direct eye contact with "flash" of light from reaction.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None

8. ADDITIONAL INFORMATION

This product contains compounds which are subject to reporting requirements of Section 313 of Title III of SARA and 40 CFR 372.

T. J. ...