

## MATERIAL SAFETY DATA SHEET

For all manufactured welding consumables designed to meet the requirements of OSHA'S Hazard Communication Standard, 29 CFR 1910.00 and Section 313 of Title III of 40 CFR 372.

### SECTION I – IDENTIFICATION

Supplier: <b>Midwest Alloys &amp; Technology, Inc. (Midalloy)</b> Address: 630 Axminister Dr., Fenton, MO 63026	Emergency Telephone No: 636/349-6000 or 800/776-3300
Trade Name: E8018-B2, E8018-B6, E8018-B8, E9018-B3	AWS Classification: 5.5

### SECTION 313 SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372.

CAS. Registry No.	Chemical Name	Percent of Weight
7439-96-5	Manganese	5% max.
7440-02-0	Nickel	7% max.

### SECTION II - HAZARDOUS INGREDIENTS

SIGNIFICANT INGREDIENTS	CAS Registry No.	ACGIH TLV mg/M3	OSHA PEL mg/M3	Weight %
Iron	7439-89-6	5.0	10	55-70
Manganese	7439-96-5	0.2 (Fume)	1 (Fume)	.5-2.0
Nickel	7440-02-0	0.1 (Soluble)	0.1 (Soluble)	0-3
Vanadium	7440-62-2	0.05	0.05	<0.5
Molybdenum	7439-98-7	5 (Soluble)	5 (Soluble)	0-1.0
Chromium	7440-47-3	0.5 (Metal) 0.05 (Water Soluble) 0.01 (Insoluble)	1 (Metal) 0.1 C (as Chromate)	0-3.5
Silicon	7440-21-3	10 (Dust)	5 (Respirable)	.1-1.0
Ca Carbonate	1317-65-3	10.0	5	5-12
Ca Fluoride	7789-75-5	2.5	2.5	3-10
Ti Dioxide	13463-67-7	10.0 (Dust)	5 (Respirable)	0-3
K-Silicate	1312-76-1	10	5 (Respirable)	<.5
Copper	7440-50-8	0.2 (Fume)	0.1 (Fume)	<.5
Mica	12001-26-2	3	3	<.5
Zirconium Silicates	7440-67-7	5 (Zr) 10 (STEL)	5 (ZR)	<.5
Silica	14808-60-7	0.1	0.05	<.5
Potassium Feldspar	68476-25-5	10	5	0-2

### SECTION III – PHYSICAL DATA (Non-Applicable)

### SECTION IV – FIRE AND EXPLOSION DATA

(NON-FLAMMABLE) Welding arc and sparks can ignite combustible. Refer to ANSI Z49.1 for precaution to be taken.

### SECTION V – REACTIVITY DATA

**HAZARDOUS DECOMPOSITION PRODUCTS:** The composition and quantity of welding fumes and gases can be influenced by such factors as the process being utilized, the material being welded, electrode type used, condition of base material being welding on, type of exhaust and the presence of contaminants in the atmosphere.

The percent and form of the fume and gas decomposition generated while being consumed are different than the hazardous ingredients listed in Section II. New compounds of fume and gas not in the consumables may form. Decomposition products are a combination of the ingredients listed in Section II and the variable factors stated above.

Ozone and nitrogen oxides may be formed by the radiation from the arc. Gaseous reaction products may include carbon monoxide and carbon dioxide.

### SECTION VI – HEALTH AND HAZARD DATA

**THRESHOLD LIMIT VALUE:** The ACGIH recommended limit for welding fume is 5 mg/m3.

**EFFECTS OF OVEREXPOSURE:** short-term Overexposure (acute) to welding fumes may result in such discomfort as: dryness or irritation of the nose, throat, or eyes, dizziness or nausea. Long-term Overexposure (chronic) may lead to siderosis and affect pulmonary function. Arc rays can injure eyes and burn skin. Electric shock can kill. Noise can damage hearing.

**EMERGENCY & FIRST AID PROCEDURES:** Call for medical aid. Employ first aid techniques by the American Red Cross.

**CARCINOGENIC:** Chromium and Nickel and their compounds are listed by the IARC and the NTP as posing a carcinogenic risk to humans.

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## SECTION VII PRECAUTIONS FOR SAFE HANDLING

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Read and understand the manufacturer's instructions and the precautionary label on the product. Refer to ANSI Z49.1 published by the American Welding Society.

**VENTILATION:** Use enough ventilation, local exhaust at the arc or both to keep fumes and gases below TLV's in the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes.

**RESPIRATORY PROTECTION:** Use respirable fume respirator or air supplied respirator when welding in confined spaces or where local exhaust or ventilation does not keep exposure below TLV.

**PROTECTIVE CLOTHING:** Wear head, hand and body protection that help prevent injury from radiation, sparks, and electrical sparks.

**PROCEDURE FOR CLEAN UP OF SPILLS AND LEAKS:** (Not applicable)

**WASTE DISPOSAL METHOD:** Prevent waste from contaminating surrounding environment. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with Federal, State and Local regulations.