

Revised: 9/30/2010

MATERIAL SAFETY DATA SHEET

For Welding Consumables and Related Products
Essentially Similar to U.S. Department of Labor Form OSHA 20
(to comply with OSHA Hazard Communication Standard 29 CFR 1910.1200)

SECTION I: Identification

Supplier Name: Weld Wire Company, Inc.

Address: 103 Queens Drive, King of Prussia, Pa. 19406

Phone: (610)265-3555 (800)523-1266 Fax: (610)265-7806

Classifications: ENi-1, ENiCu-7, ENiCrFe-2, ENiCrFe-3, ENiCrMo-3, ENiCrMo-4, ENiCrMo-10, ENiCrCoMo-1,

Specifications: AWS A5.11

Classifications: ECuNi, Specifications: AWS/SFA 5.6

Classifications: ENi-CI, ENiFe-CI Specifications: AWS/SFA 5.15

SECTION II: HAZARDOUS INGREDIENTS/Identity Information

IMPORTANT: This Section covers materials from which this product is manufactured

Ingredients	CAS No.	Approx. Wt. %	OSHA PEL Mg/M3	ACGIH TLV/ Mg/M3	Carcinogenicity
Iron	7439-89-6	.5-10	5	10	No
*Chromium	7440-47-3	0-15	.05	.05	Yes
Nickel	7440-02-0	40-70	1	1	Yes
*Manganese	7439-96-5	.5-6	5	1	No
Silicon	7440-21-3	.1-1.0	5	3	No
Molybdenum	7439-98-7	0-15	15	10	No
Columbium	7440-03-1	0-5	5	5	No
*Copper	7440-50-8	0-5	.1	.2	No
Titanium	7440-32-6	0-2	15	10	No
Graphite	7782-42-5	0-3	Not Registered	5	No
Calcium Carbonate	1317-65-3	5-10	5	10	No
Calcium Fluoride	2-5	2.5	2.5	2.5	No
Strontium Carbonate	1633-05-2	0-15	Not Registered	Not Registered	No
Cryolite	15096-52-3	2-5	2.5	2.5	No
Potassium Titanate	12030-97-6	0-3	Not Registered	10	No
Titanium Dioxide	13463-67-7	0-10	15	10	No
Potassium Silicate	1312-76-1	0-2	Not Registered	5	No
Sodium Silicate	1344-09-8	1-5	Not Registered	Not Registered	No

* The ingredients marked with an asterisk are covered under the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372.

SECTION III: PHYSICAL DATA

NOT APPLICABLE

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Welding arc and sparks can ignite combustibles and flammables. Refer to American National Standard Z49.1 for fire prevention during the use of welding and allied procedures.

SECTION V: HEALTH HAZARD DATA

“Electric arc-welding may create one or more of the following health hazards: *Fumes and gases* can be dangerous to your health. Arc *Rays* can injure eyes and burn skin. *Electric Shock* can kill.

EFFECTS OF OVEREXPOSURE: FUMES AND GASES can be dangerous to your health. SHORT_TERM (ACUTE) EXPOSURE to welding fumes may result in discomfort such as: dizziness, nausea, or dryness or irritation of nose, throat, or eyes. LONG-TERM (CHRONIC) OVEREXPOSURE may lead to siderosis (iron deposit in lungs) and is believed by some investigators to affect pulmonary function.”

EMERGENCY & FIRST AID PROCEDURES: Remove to fresh air, obtain medical attention. Employ first aid techniques recommended by the American Red Cross.

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SECTION IV: REACTIVITY DATA

HAZARDOUS DECOMPOSITION PRODUCTS: Welding fumes cannot be classified simply. The composition and quality of welding fumes and gases are dependent upon the metal being welded, the process, procedure, and the electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings off the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and the amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 2. Fume and gas decomposition products, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the electrode. Also, new compounds not in the electrode may form. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 2, plus those from the base metal and coating, etc., as noted above. These components are virtually always present as complex compounds and not metals (Characterization of Arc Welding Fume; American Welding Society)

Reasonably expected fume constituents of this product could include primarily oxides of nickel, fluorides and complex oxides of iron, manganese, silicon, chromium, molybdenum, titanium, aluminum, columbium and copper. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by radiation from the arc.

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample from the inside the welder's helmet if worn or in the worker's breathing zone.

See AWS F1.1 and AWS F1.21985, available from the American Welding Society.

SECTION VII: SPILL OR LEAK PROCEDURES

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.

SECTION VIII: SPECIAL PROTECTION INFORMATION (See Note)

Read and understand the manufacturer's instructions and the precautionary label on the product. *Ventilation* – Use enough ventilation, local exhaust at the arc, or both, to keep the fumes and gases from 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 respiratory or air supplied respirator when welding in a confined space or where local exhaust or ventilation does not keep exposure below a recommended exposure limit. *Eye Protection* – Wear helmet or use face shield with filter lens. Provide protective screens and flash goggles, if necessary, to shield others. As a rule of thumb start with a shade that is too dark to see the weld zone. Then go, the next lighter shade, which gives sufficient view of the weld zone. *Protective Clothing* – Wear hand, head, and body protection which help to prevent injury from radiation, sparks, and electric shock. See ANSI Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground."

SECTION IX: SPECIAL PRECAUTIONS (See Note)

OTHER PRECAUTIONS: Use exhaust system to clear welding fumes. Make sure that inhaled air does not contain fume constituents above permissible exposure levels.

NOTE: Other precautions for additional safety information on welding and cutting, see American Standard Z49.1-1983, Safety in Welding and Cutting, and the Welding Handbook, Vol. 1, Chapter 9, Safe Practices in Welding and Cutting, both available from American Welding Society, Inc. 550 NW Le Jeune Road, P.O. Box 351040, Miami, FL 33135, Tel. (305) 443-9353.

Weld Wire Company Inc. believes that information set forth in this Material Safety Data Sheet is accurate.

Weld Wire Company Inc. makes no warranty, expressed or implied, with respect thereto and disclaims any liability from reliance therein.