

### Section I – Company and Product Identification

Manufacturer/Supplier Name:	<b>Strongweld</b> (NYCO Inc.)
Address:	360 Grand Cypress Ave – 301, Palmdale, CA 93551
Tel/Fax Number:	(661) 274-0584
Trade Name/s:	<b>Strongweld</b> Dual Shield 71M Indura 71-V
Classification:	AWS 5.20 Mild Steel E71T-1C/1M
Product Type:	Flux Core Arc Welding FCAW Tubular Wires Gas Shielded
Date, Version:	08/23/2014, SDS71M-2014-01 * supersedes all previous



### Section II – Hazardous Materials

**IMPORTANT:** This section covers the materials from which this product is manufactured. The fumes and gases that emanate from welding -the normal use for this product- are covered by Section IV. The term “hazardous” in “Hazardous Materials” should be interpreted as a term required and defined in OSHA Hazard Communication Standard (29 CFR part 1910.1200).

Ingredients	% weight	CAS N°	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Iron	75-95	7439-89-6	5 (Respirable fraction)	10
Manganese	1 - 4	7439-96-5	5 (Ceiling Limits)	0.2
Titanium Dioxide	4 - 10	13463-67-7	5 (Respirable fraction)	10
Silicon	0.5 - 3	7440-21-3	5 (Respirable fraction)	10
Nickel	0 - 4	7440-02-0	1	1.5 (Metal)

### Section III – Hazard Data

Non flammable: Welding arc and sparks can ignite combustibles. See Z49.1 referenced in Section VI. When welding adopt safety precautions to avoid electric shock and explosion risk associated with compressed gas.

### Section IV – Reactivity Data

#### Hazardous Decomposition Products

Welding fumes and gases cannot be classified simply. The composition and quality of both are dependent upon the metal being welded, the process, procedures, and electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed, include: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and 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 II. Decomposition products of normal operation those originating from volatilization, reaction, or oxidation of the materials shown in section II, plus those from the base metal and coating, etc., as noted above.

It is understood, however, that the elements and or oxides to be mentioned are virtually always present as complex oxides and not as metals. The elements or oxides listed below correspond to the ACGIH categories located in (TLV Threshold Limit Values for Chemical Substances and Physical Agents in the Work Room Environment).

### Section IV – Reactivity Data (Cont.)

Reasonably expected elements present of the fumes include: complex oxides of iron, manganese, silicon and copper.

Ingredients	CAS N°	OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
Iron Oxide	1309-37-1	10 (as Fe)	5 (as Fe)
Manganese Compounds (as Mn)	7439-96-5	5 (Ceiling Limit as Fume)	0.2
Titanium Dioxide	13463-67-7	5 (Respirable fraction)	10
Silica	60676-67-7	0.1	2 (Respirable Fume)
Nickel Compounds (Soluble)		1 (as Ni)	0.1 (as Ni)
Nickel Compounds (Insoluble)		1 (as Ni)	0.2 (as Ni)

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

One recommended way to determine the composition and quantities of fumes and gases to which workers are exposed, is to take an air sample inside the welder's helmet 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 Environments – Sampling Strategy Guide", which gives additional advice on sampling). At a minimum, materials listed in this section should be analyzed.

### Section V – Health Hazard Data

**Threshold Limit Value:** The ACGIH recommended general limit for Welding Fume NOC (Not Otherwise Classified) is 5 mg/m<sup>3</sup>. ACGIH-1998 preface states the TLV-TWA should be used as guides in the control of health hazards and should not be used as fine lines between safe and dangerous concentrations. See section V for specific fume constituents which may modify this TLV.

**Effects of Overexposure:** Electric arc welding may create one or more of the following health hazards:

**FUMES AND GASES** can be dangerous to your health.

**SHORT-TERM (ACUTE) OVEREXPOSURE** to welding fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat or eyes.

**PRIMARY ROUTES OF ENTRY** are the respiratory system, eyes and / or skin.

**IRON, IRON OXIDE, MANGANESE** – Remove from overexposure and apply artificial respiration if needed. Wash eyes or skin with water to remove dusts.

**LONG-TERM (CHRONIC) OVEREXPOSURE** may lead to siderosis (iron deposit in lungs) and is believed by some investigators to affect pulmonary functions.

**PRIMARY ROUTES OF ENTRY** are the respiratory systems.

**IRON, IRON OXIDE, TITANIUM, TITANIUM OXIDE** – None are known. Treat as a nuisance dust or fume.

**MANGANESE** – Long Term overexposure to manganese compounds may affect the central nervous system. Symptoms include muscular weakness, tremors similar to Parkinson's disease. Behavioral changes and changes in handwriting may also appear. Employees exposed to manganese compounds should get quarterly medical examinations for early detection of manganism.

**Nickel, Nickel Compounds:** Metallic taste, nausea, tightness in chest, fever, allergic reactions.

**Chromium:** Inhalation of fume with chromium VI compounds can cause irritation of the respiratory system, lung damage and asthma-like symptoms. Swallowing chromium VI salts can cause severe injury or death. Dust on the skin can form ulcers. Eyes may be burned by chromium VI compounds. Allergic reactions are likely in some people from chromium compounds.

**Copper:** Metal fume fever can be caused by fresh copper oxide.

**Barium:** Aching eyes, rhinitis, frontal headache, wheezing, laryngeal spasms, salivation or anorexia.

**ARC RAYS** can injure eyes and burn skin.

**ELECTRIC SHOCK** can kill. See section VI.

### Section V – Health Hazard Data (Cont.)

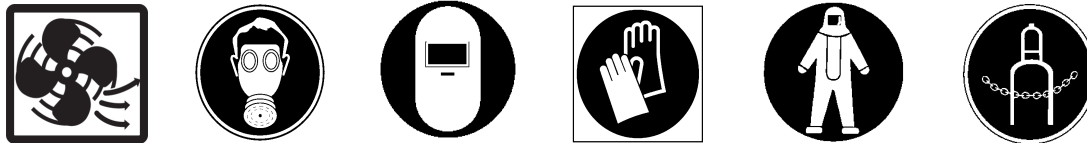


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**Emergency and First Aid Procedures:** Call for medical aid immediately. Employ first aid techniques recommended by the American Red Cross. **Eyes & Skin:** If irritation or flash burns develop after exposure, consult physician. IF BREATHING IS DIFFICULT give oxygen. IF NOT BREATHING, employ CPR (Cardiopulmonary Resuscitation) techniques. IN CASE OF ELECTRICAL SHOCK, turn off power and follow recommended treatment. In all cases call a physician.

**WARNING:** This product, when used for welding or cutting, produces fumes or gases which contain chemicals known to the State of California to cause birth defects and, in some cases, cancer. (California Health & Safety Code Section 25249.5 et seq.)

### Section VI – PRECAUTIONS FOR SAFE HANDLING AND USE / APPLICABLE CONTROL MEASURES



Read and understand the manufacturer's instructions and the precautionary label on the product. (See American National Standard Z49.1. Safety in Welding and Cutting published by the American Welding Society, P.O. Box 351040, Miami, FL 33135 and OSHA Publication 2206 (29CFR1910), U.S. Government Printing Office, Washington, D.C. 20402. For more detail on many of the following:

**VENTILATION:** Use enough ventilation, local exhaust at the arc, or both to keep the 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 NIOSH approved or equivalent fume respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below TLV.

**EYE PROTECTION:** Wear helmet or use face shield with filters lens. As a rule of thumb begin with Shade Number 14. Adjust if needed by selecting the next lighter and / or darker shade number. Provide protective screens and flash goggles, if necessary, to shield others

**PROTECTIVE CLOTHING:** Wear hand, head and body protection, which help to prevent injury from radiation, sparks and electrical shock. See ANSI Z49.1. At 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.

PROCEDURE FOR CLEANUP OF SPILLS OR LEAKS: Not Applicable.

**WASTE DISPOSAL:** 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 regulation.

**SPECIAL PRECAUTIONS:** IMPORTANT: Maintain exposure below the PEL/TLV. Use industrial hygiene monitoring to ensure that you use of this material do not create exposures which exceed PEL/TLV. Always use exhaust ventilation. Refer to the following sources for important additional information. ANSI Z49.1 The American Welding Society, P.O. Box 351040, Miami, FL 33135 – OSHA (29CFR1910) U.S. Dept. of Labor, Washington D.C. 20210.