U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form). Format meets ANSI Z400.1-1998, OSHA 1910.1200 and WHMIS requirements.

Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

Section 1: Product and Company Identification

Product Name:	
Product Type:	Carbon Steel Electrode
AWS Classification:	AWS ER70S-6
Manufacturer:	TECHNIWELD USA
Physical Address:	6205 BOAT ROCK BLVD ATLANTA, GA 30336
Mailing Address:	P.O. Box 44226 ATLANTA, GA 30336
Business Phone:	404-699-9900
Business Fax:	404-699-7800
E-mail Address:	info@TECHNIWELDUSA.COM
Web Address:	www.TECHNIWELDUSA.COM
Emergency Phone:	CHEMTREC (24-Hour) 1-800-424-9300 Outside of the USA & Canada 1-703-527-3887
Date of Preparation:	June 2, 2015 (Revised November 03, 2015)
OSHA Regulatory Status:	Non-Regulated
WHMIS Classification:	Not a Controlled Product

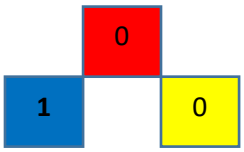
Section 2: Hazards Identification

This section covers the materials from which this product is manufactured.The fumes and gases produced during welding with the normal use of this product are covered by section V:see it for industrial hygiene information.
(1)The term 'hazardous' in 'Hazardous Materials ' should be interpreted as term required and defined in the Hazards Communication Standard and does not necessarily inply the esistence of any hazard

Ingredients	**Wt%**	**TLV mg/mg^3**	**PEL mg/m^3**	**Supplemental Information**
Carbon Steel Wire	100	10*	10*	* Not listed. Nuisance value maximum is 10 milligrams per cubic meter.PEL value foriron oxide is 10mg/m³. TLV value for iron oxide is 5 milligrams per cubic meter. *** Subject to the reporting tequirements of section 311, 312 and 313of the Emergency Planning and community right-to-know Act of 1986 and of 40 CFR 370 and 372. (A)Values are for copper fume. (C)Values are for manganese fume. STEL(short term EXposure Limit) is 3.0 milligrams per cubic meter.
Nominal Wire Composition				
Total Manganese***	<2	0.2	1.0(c)	
Total Cupper including plated coating***	<0.5	0.2(a)	0.1(a)	
Iron	bal.	10*	10*	

Section 3: Composition and Information on Ingredients

Non Flammable: Welding arc and sparks can ignite combustibles and flammable Product. See Z49.1 referenced in Section VI.



Health = 1 **Flammability = 0** **Reactivity = 0**

Section 4: First Aid Measures

Threshold Limit Value: The ACGIH recommended general limit for welding Fume NOC (Not Otherwise Classified) is 5 mg/m³. ACGIH-1987-88 preface states that 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.Concentration : See Section V for specific fume constituents which may modify this TLY. Threshold Limit values are figures published by the American Conference of Government Industrial Hygienists. Units are milligrams per cubic meter of air.
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.Common entry is by inbalation.Other possible routes are skin contact and ingestion.
Short -term(acute) overexposure to welding fumes may result in discomfort such as metal fume faver,dizziness,nausea or dryness or irritation of nose, throat ot eyes. May aggravate pre-existing respiratory problems(e.g asthma, emphysema)
Long-term (chronic) overexposure to welding fumes can lead to siderosis (iron deposits in lung) and may affect pulmonary function. Manganese overexposure can affect the central nervous system,resulting in impaired speech and movement. Bronchitis and some lung fibrisis have been reported.
Arc Rays can injure eyes and bum skin. Skin cancer has been reported.
Electric Shock can kill. If welding must be performed in damp locations or with wet clothing on metal structures or when in cramped positions such as sitting,kneeling or lying, if there is a high risk of unavoidable or accidental contact with work piece,use the following equipment: Semiau -tomatic DC Welder DC Manual(stick) Welder,or AC Welder with Reduced Voltage Contro

Emergency and First Aid Procedures:Call for medical aid.Employ first aid techniques recommended by the American Red Cross. IF BREATHING IS DIFFICULT give oxygen. IF NOT BREATHING employ VPR(Cardiopulmonary Resuscitation) techniques. IN CASE OF ELECTRICAL SHOCK,turn off power and follow recommended treatment

Section 5: Fire Fighting Measures

Hazardous Decomposition Products: Welding fumes and gases cannot be classified simply. The Composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used.
Other conditions which also influeace 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 worker 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 include thos originating from the volatilization,reaction, or oxidation of the matieriats shown in Section II, plus those from the base metal and coating. etc., As noted above.
Reasonably expected fume constituents of this product would include: Primarily iron oxide and fluorides: secondarity complex oxides of aluminum,calcium,magnesium,manganese, potassium,silicon,sodium,titamium and zirconium when used with recommended Lincoln weld fluxes.Primarily iron oxide,secondarilu compies oxides of copper,manganese and silicon when used with gas shielding.
Maximum fume exposure guideline for this product (based on manganese content)is 1.6 milligrams per cuhic meter.
Gascous reaction products may include carbon monoxide and carbon dioxide.Ozone and nitrogen oxides may be formed by the radiation from the arc.

Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breath -ing zone. Improve ventilation if exposures are not below limits.See ANSI/AWS F1.1 F1.2, F1.4 and F1.5 available from the Amercian Welding society,550N.W.Lejeune Road,Miami, FL33126.

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Section 6 & 7: Accidental Release Measures & Handling and Storage

Read and understand the manufacturer's instruction and the precautionary label on the product. Requset Lincoln safety publication E205. See American National Standard Z49.1, Safety in Welding and Cutting published by the American Welding Society,550N.W.Lejeune Road,Miami, FL 33126 and OSHAPublication 2206(29CFR1910),U.S.Government Printing Office,Washington, D.C.20402 for more details on many of the following:
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.Keep exposure as low as possible.
Respiratory Protection: use respirable fume respirator or air supplied respirator whe welding in confined space or gencral work area when local exhaust or ventilation does not keep exposure below TLV.
Handling and Storage: Wear helmet or use face shield with filter lens shade number 12* or darker. Shield others by providing screens and flash goggles,(*) No specific recommendation for submerged arc.
Handling and Storage: Wear hand,head,and body protection which help to prevent injury from radiation,sparks and electrical shock. See 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 permit electrically live parts or electrodes to contact skin...or clothing or gloves if they are wet. Insulate from work and ground.
Disposal Information: Discard any product, residue, disposable container,or liner as ordlnary *waste in an environmentally acceptable manner unless otherwise noted.*