Date: 1/1/90

MSDS No.: US-W5

Trade Name: Lincolnweld L-56

Sizes: All

DATA SAFETY For U.S. Manufactured Welding Consumables and Related Products

SHEET

Conforms to Hazard Communication Standard 29CFR 1910.1200 Rev. October, 1988

### SECTION RIDEVILLE AND RES Carbon steel electrode Product Type: Manufacturer/ ER70S-6 Classification: The Lincoln Electric Company Supplier: EH11K 22801 St. Clair Avenue (EG) Cleveland, OH 44117-1199 (216) 481-8100

TIVIDO IV

This section covers the materials from which this product is manufactured. The fumes and gases produced during welding IMPORTANT! with the normal use of this product are covered by Section V; see it for industrial hygiene information. CAS Number shown is representative for the ingredients listed.

(1) The term 'hazardous' in 'Hazardous Materials' should be interpreted as a term required and defined in the Hazards

CAS Number shown is representative for the ingre- The term 'hazardous' in 'Hazardous Materials' sh Communication Standard and does not necessarily agredients:	CAS No.		TLV mg/m	PEL3	Supp	lemental Informatio	
		100	10*	10*		Not listed. Nuisance value	
arbon steel wire					*	* Not listed. Nursance variation maximum is 10 mg. per cubic	
inal composition:	7439-96-5	<2.0	5	5(c)	meter.		
Total manganese ***	7440-50-8		10*	10*			
Total copper including plated coating ***	7439-89-6		10*	10*	*** Subject to the reporting		
Iron	7 400 00 5					requirements of Sections	
					312.	312, and 313 of the Emerg	
		T				Planning and Community	
			+		7	Right-to-Know Act of 1986	
		+	1		1	and of 40CFR 370 and 372.	
		-	+	+	7		
			-	+	┪		
				+	-		
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					4		
					4		
		+					
		$\dashv$	+	1			
				-	$\neg$		
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					一 (	(c) Ceiling value not to	
					-	be exceeded at any time	
		_					
			_	-	$\neg$	_	

SECTION III - FIRE AND EXPLOSION HAZARD DATA

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

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## SECTION IV - HEALTH HAZARD DATA

Thresho Limit Value: The ACGIH recommended general limit for Welding Fume NOC - (Not Otherwise Classified) is 5

ACGI 37-88 preface states that the TLV-TWA should be used as guides in the control of health hazards and should not used fine lines between safe and dangerous concentrations. See Section V for specific fume constituents which may modify in TLV. 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 inhalation.

Short-term (acute) overexposure to welding fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat, or eyes.

Long-term (chronic) overexposure to welding fumes can lead to siderosis (iron deposits in lung) and affect pulmonary

Arc Rays can injure eyes and burn skin. Flectric Shock can kill.

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 CPR (Cardiopulmonary Resuscitation) techniques. IN CASE ELECTRICAL SHOCK, turn off power and follow recommended treatment. In all cases call a physician.

### SECTION V - REACTIVITY DATA

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 influence the composition and quantity of the fumes and gases to which workers may be expoinclude: coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the vof the work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plas well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and de activities.)

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form fr ingredients listed in Section II. Decomposition products of normal operation include those originating from the volat reaction, or oxidation of the materials shown in Section II. plus those from the base metal and coating, etc., as note

Reasonably expected fume constituents of this product would include: Primarily iron oxide and fluorides; secondarily comploxides of aluminum, calcium, magnesium, manganese, potassium, silicon, sodium, titanium and zirconium when used with recommended Lincolnweld fluxes.

Primarily iron oxide; secondarily complex oxides of copper, manganese and silicon when used with gas shielding. Maximum fume exposure guideline and PEL for this product is 5.0 milligrams per cubic meter.

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 a sample from inside the welder's helmet if worn or in the worker's breathing zone. See ANSI/AWS F1.1 'Method for Sampling Particles Generated by Welding and Allied Processes,' available from the American Welding Society, 550 N.W. Ledeune Road, FL 33126.

# SECTION VI AND VII CONTROL MEASURES AND PRECAUTIONS FOR SAFE HANDLING AND

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, 550 N.W. LeJeune Road. Miami, FL, 33126 and OSHA Publication 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 zone and the general area. Train the welder to keep his head out of the fumes.

zone and the general area. Train the welder to keep his head out of the tumes.

Respiratory Protection: Use respirable fume respirator or air supplied respirator when welding in confined space general work area when local exhaust or ventilation does not keep exposure below TLV.

Eye Protection: Wear helmet or use face shield with filter lens shade number 12\*or darker. Shield others by provisoreens and flash goggles. (\*) No specific recommendation for submerged arc.

Protective Clothing: Wear hand, head, and body protection which help to prevent injury from radiation, sparks ar electrical shock. See Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include ar tectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Train the welder not to permit electrical shock in the 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 ordinary waste in an acceptable manner unless otherwise noted.