

50267



Date:	12/14/01	MSDS No.:	US-M290
Trade Name:	Jet-LH 78 MR		
Sizes:	All		
Supersedes:	2/10/99		

# MATERIAL SAFETY DATA SHEET

## For Welding Consumables and Related Products

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

### SECTION I - IDENTIFICATION

<b>Manufacturer/Supplier:</b> The Lincoln Electric Company 22801 St. Clair Avenue Cleveland, OH 44117-1199 (216) 481-8100	<b>Product Type:</b> Covered Electrode  <b>Classification:</b> AWS E7018H4R
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### SECTION II - HAZARDOUS MATERIAL (1)

**IMPORTANT!**

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.

CAS Number shown is representative for the ingredients listed. All ingredients listed may not be present in all sizes.

(1) The term 'hazardous' in 'Hazardous Materials' should be interpreted as a term required and defined in the Hazards Communication Standard and does not necessarily imply the existence of any hazard.

Ingredients:	CAS No.	Wt. %	TLV mg/m <sup>3</sup>	PEL mg/m <sup>3</sup>
Iron	7439-89-6	10	10*	10*
Limestone and/or calcium carbonate	1317-65-3	10	10	15
Fluorides (as F)	7789-75-5	5	2.5	2.5
Silicates and other binders	1344-09-8	<5	10*	10*
Titanium dioxides (as Ti)*****	13463-67-7	<5	10	15
Manganese and/or manganese alloys and compounds (as Mn)*****	7439-96-5	<5	0.2	1.0(c)
Silicon and/or silicon alloys and compounds (as Si)	7440-21-3	1	10*	10*
Quartz	14808-60-7	<0.5	#0.05**	#0.1**
Aluminum oxide and/or Bauxite*****	1344-28-1	<0.5	10	10
Zinc and/or zinc oxides*****	1314-13-2	<0.5	5(d)	5(d)
Iron oxides (as Fe)	65996-74-9	<0.5	5	10
Mineral silicates	1332-58-7	<0.5	5**	5**
Lithium compounds (as Li)	554-13-2	<0.5	10*	10*
Vanadium alloys (as V)	7440-62-2	<0.5	.05(@)	.05(@)
Carbon steel core wire	7439-89-6	60	10*	10*

<p><b>Supplemental Information:</b> (*) Not listed. Nuisance value maximum is 10 milligrams per cubic meter. PEL value for iron oxide is 10 milligrams per cubic meter. TLV value for iron oxide is 5 milligrams per cubic meter.</p> <p>(**) As respirable dust.</p> <p>(*****) Subject to the reporting requirements of Sections 311, 312, and 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40CFR 370 and 372.</p> <p>(@) As V<sub>2</sub>O<sub>5</sub> fume or dust.</p>	<p>(c) Values are for manganese fume. STEL (Short Term Exposure Limit) is 3.0 milligrams per cubic meter.</p> <p>(#) Crystalline silica (quartz) is on the IARC (International Agency for Research on Cancer) and NTP (National Toxicology Program) lists as posing a carcinogenic risk to humans.</p> <p>(d) Values are for zinc oxide fume. The ACGIH TLV has a STEL (Short Term Exposure Limit) of 10 milligrams per cubic meter.</p>
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### 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.

(CONTINUED ON SIDE TWO)