

Lincore® FROG MANG®

Severe Impact

Key Features

- ▶ Designed for repair of manganese frogs and manganese crossing diamonds in the railroad industry
- ▶ High alloy austenitic manganese deposit
- ▶ Unlimited layers with proper preheat and interpass temperatures and procedures

Typical Applications

- ▶ Manganese crossing diamonds
- ▶ Manganese railroad frogs

DIAMETERS / PACKAGING

Diameter in (mm)	9 lb (4 kg) Plastic Spool 36 lb (16.3 kg) Master Carton	25 lb (11.3 kg) Steel Spool
1/16 (1.6)		ED026106
5/64 (2.0)	ED034485	ED026105

MECHANICAL PROPERTIES⁽¹⁾

As-Welded	Rockwell Hardness (R _C)	
	Work-Hardened	
20 - 30	40 - 50	

DEPOSIT COMPOSITION⁽¹⁾

	%C	%Mn	%Si	%Cr
6 Layers	1.07	25.5	0.17	4.59

TYPICAL OPERATING PROCEDURES

Diameter, Polarity ESO - in (mm)	Wire Feed Speed m/min (in/min)	Voltage (Volts)	Approx. Current (Amps)	Deposition Rate kg/hr (lb/hr)
1/16 in (1.6 mm), DC+ 1 (25)	5.1 (200)	27	220	3.0 (6.7)
	6.4 (250)	29	250	4.0 (8.7)
	8.3 (325)	32	300	5.3 (11.6)
5/64 in (2.0 mm), DC+ 2 (50)	3.8 (150)	27	240	3.4 (7.4)
	5.1 (200)	29	290	4.9 (10.7)
	6.4 (250)	31	340	6.4 (14.0)

NOTE: Remove all damaged and foreign material by the air-carbon arc gouging process and grinding. Make sure all defective metal is removed. In the event hairline cracks remain at flangeway depth, use a 1/8 in diameter E308 stainless product, such as Blue Max® or Red Baron® 308L AC-DC to tie up these cracks and avoid hot cracking during the buildup process. Use only light amounts and do not build-up with E308 stainless. It is for use in emergency situations where no other alternative is available to repair flangeway cracks. As with all austenitic manganese welding products, interpass temperatures should be limited to 260°C (500°F) maximum. A stringer bead, or at most, a slight weave is recommended to limit heat build-up. Excessive heat build-up causes manganese carbide precipitation which damages the toughness of austenitic manganese.

IMPORTANT: SPECIAL VENTILATION AND/OR EXHAUST REQUIRED

Fumes from the normal use of some welding products can contain significant quantities of components - such as chromium and manganese - which can lower the 5.0 mg/m³ maximum exposure guideline for general welding fume. BEFORE USE, READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET (MSDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.

⁽¹⁾ Composition and properties depend upon dilution. Single layer deposit properties depend upon base metal and/or build-up material.