Techalloy® 309LMo

Similar to AWS ER309LMo • Stainless

Conformances

Similar to
AWS A5.9/A5.9M: 2006: ER309LMo
ISO 14343:2009: 23 12 2 L

Welding Positions

All

Key Features

- Similar to 309 with the exception for the addition of 2.0 - 3.0% molybdenum to increase its pitting corrosion resistance in halide-containing environments.
- Surfacing of base metals to improve their resistance to corrosion.
- Used to achieve a single-layer overlay with a chemical composition similar to that of a 316L stainless steel.
- Used for the first layer of multilayer overlays with filler metals such as 316L or 317L stainless steel.

DIAMETERS / PACKAGING

Diameter in	(mm)	MIG 33 lb (14.9 kg) Wire Basket	TIG 10 lb (4.5 kg) Tube 30 lb (13.6 kg) Master Carton	SAW 55 lb (25 kg) Coil
0.035	(0.9)	MG309LMO035667		
0.045	(1.1)	MG309LMO045667		
1/16	(1.6)	MG309LMO062667		
3/32	(2.4)			SA309LMO093726
1/8	(3.2)			
5/32	(4.0)		TG309LMO156638*	

*Made to Order (MTO)

DEPOSIT COMPOSITION[1] – *As Required per AWS A5.9/A5.9M: 2006*

	%C	%Cr	%Ni	%Mo	%Mn
Requirements[1] AWS ER309LMo	0.03 max.	23.0 - 25.0	12.0 - 14.0	2.0 - 3.0	1.0 - 2.5
Typical Performance[2] Techalloy® 309LMo	0.01	22.3	15.0	2.6	1.40
	%Si	**%P**	**%S**	**%Cu**	**FN**
Requirements[1] AWS ER309LMo	0.30 - 0.65	0.03 max.	0.03 max.	0.75 max.	Not Required
Typical Performance[2] Techalloy® 309LMo	0.40	0.02	0.01	0.10	6 - 12

[1] Nearest classification

TYPICAL OPERATING PROCEDURES

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
MIG	0.035 (0.9) 0.045 (1.1) 0.062 (1.6)	26-29 28-32 29-33	160-210 180-250 200-280	30-50 CFH	98/99% Argon + 2/1% Oxygen 97% Argon + 3% CO_2
TIG	5/32 (4.0)		160-230	20-40 CFH	100% Argon
SAW	3/32 (2.4)	28-33	275-350		Lincolnweld® P2007

[1]Typical all weld metal. [2]See test results disclaimer on pg. 18.
Safety Data Sheets (SDS) are available on our website at www.techalloy.com

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

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Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

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