

Excalibur® 308/308H-16, 308L-16

308/308H-16: AWS E308-16/E308H-16; 308L-16: AWS E308L-16



KEY FEATURES

- ▶ Q2 Lot® - Certificate showing actual deposit chemistry and calculated ferrite number (FN) available online
- ▶ Designed with low carbon levels to help eliminate carbide precipitation in high temperature service
- ▶ Flux coating provides smooth arc transfer and slag is self-peeling for easy removal
- ▶ Versatile electrode designed to weld several types of austenitic steels

APPLICATIONS

- ▶ A743 and A744 Type CF-8 cast material
- ▶ Type 304 stainless steels

WELDING POSITIONS

308/308H-16, 308L-16 All, except vertical down

CONFORMANCES

AWS A5.4/A5.4M: 2006:	
308/308H-16	E308-16, E308H-16
308L-16	E308L-16
ASME SFA-A5.4:	Same as AWS
ABS:	
308/308H-16	E308-16, E308H-16
308L-16	E308L-16
CWB/CSA W48-06:	
308/308H-16	E308-16, E308H-16
308L-16	E308L-16
MIL-E-22200/2:	
308/308H-16	MIL-308-16
308L-16	MIL-308L-16

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	8 lb (3.6 kg) Easy Open Can	
		308/308H-16	308L-16
3/32 (2.4)	12 (300)	ED033083	ED033079
Diameter in (mm)	Length in (mm)	10 lb (4.5 kg) Easy Open Can	
		308/308H-16	308L-16
1/8 (3.2)	14 (350)	ED033084	ED033080
5/32 (4.0)	14 (350)	ED033085	ED033081
3/16 (4.8)	14 (350)	ED033086	ED033082



THE LINCOLN ELECTRIC COMPANY

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.4/A5.4M: 2006

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
Requirements AWS E308-16, E308H-16 AWS E308L-16	Not Specified Not Specified	550 (80) min. 520 (75) min.	35 min. 35 min.	Not Specified Not Specified
Typical Performance⁽³⁾ As-Welded 308/308H-16 308L-16	435 - 545 (63 - 79) 370 - 420 (54 - 61)	595 - 640 (86 - 93) 540 - 595 (78 - 86)	41 - 48 50 - 55	2 - 4 8 - 9

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.4/A5.4M: 2006

	%C	%Cr	%Ni	%Mo	%Mn
Requirements AWS E308-16, E308H-16, E308L-16	0.04 - 0.08 ⁽⁴⁾	18.0 - 21.0	9.0 - 11.0	0.75 max.	0.5 - 2.5
Typical Performance⁽³⁾ 308/308H-16 308L-16	0.05 - 0.06 0.02 - 0.03	19.7 - 20.3 19.5 - 19.8	9.9 - 10.1 9.7 - 10.3	0.03 - 0.07 0.04 - 0.13	0.7 - 0.8 0.6 - 0.9
	%Si	%P	%S	%Cu	
Requirements AWS E308-16, E308H-16, E308L-16	1.00 max.	0.04 max.	0.03 max.	0.75 max.	
Typical Performance⁽³⁾ 308/308H-16 308L-16	0.30 - 0.40 0.29 - 0.36	0.03 0.03	0.02 0.02	0.17 0.10	

⁽¹⁾ Typical all weld metal. ⁽²⁾ Measured with 0.2% offset. ⁽³⁾ See test results disclaimer below. ⁽⁴⁾ AWS Requirement for E308L-16 is 0.04% max. carbon.

TYPICAL OPERATING PROCEDURES

Polarity	Current (Amps)			
	3/32 in (2.4 mm)	1/8 in (3.2 mm)	5/32 in (4.0 mm)	3/16 in (4.8 mm)
308/308H-16, 308L-16 DC+/AC	40 - 70	60 - 100	90 - 140	120 - 185

NOTE: Preferred polarity is listed first.

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

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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