

EXCALIBUR® 316/316L-17

Stainless ▪ AWS E316-17, E316L-17

KEY FEATURES

- Substantial ferrite content for crack resistance
- Q2 Lot® - Certificate showing actual deposit composition and ferrite number (FN) by ferrite scope available online
- Molybdenum grade for increased corrosion resistance
- Designed with low carbon levels to help eliminate carbide

WELDING POSITIONS

- All, except vertical down 5/32 in and smaller diameter
- 3/16 in diameter on Flat and Horizontal only

CONFORMANCES

AWS A5:	E316-17, E316L-17
ABS:	E316-17, E316L-17
CWB/CSA:	E316-17, E316L-17

TYPICAL APPLICATIONS

- 316 and 316L stainless steel
- ASTM A240 Type 316 and 316L stainless steel
- ASTM A743 or A744 Types CF-8M and CF-3M
- For joining extra low carbon molybdenum bearing austenitic stainless steels

DIAMETERS / PACKAGING

Diameter in (mm)	Length in (mm)	8 lb (3.6 kg) Easy Open Can	10 lb (4.5 kg) Easy Open Can
3/32 (2.4)	12 (300)	ED033110	
1/8 (3.2)	14 (350)		ED033111
5/32 (4.0)	14 (350)		ED033112
3/16 (4.8)	14 (350)		ED033113

MECHANICAL PROPERTIES⁽¹⁾ – As Required per AWS A5.4

	Yield Strength ⁽²⁾ MPa (ksi)	Tensile Strength MPa (ksi)	Elongation %	Ferrite Number
Requirements AWS E316-17 AWS E316L-17	Not Specified Not Specified	520 (75) min. 490 (70) min.	30 min. 30 min.	Not Specified Not Specified
Typical Results⁽³⁾ - As-Welded	469 (68)	590 (85)	45	7-14

DEPOSIT COMPOSITION⁽¹⁾ – As Required per AWS A5.4

	%C ⁽⁴⁾	%Cr	%Ni	%Mo	%Mn
Requirements - AWS E316L-17	0.04 max	17.0-20.0	11.0-14.0	2.0-3.0	0.5-2.5
Typical Results⁽³⁾	≤0.03	19.1-19.7	11.6-12.7	2.1-2.4	0.8-1.0
	%Si	%P	%S	%Cu	
Requirements - AWS E316L-17	1.00 max	0.04 max	0.03 max	0.75 max	
Typical Results⁽³⁾	0.61-0.72	≤0.02	≤0.01	≤0.26	

TYPICAL OPERATING PROCEDURES

Polarity ⁽⁵⁾	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)
DC+	40-80	75-110	95-150	130-200
AC	40-80	75-110	95-150	130-200

⁽¹⁾Typical all weld metal. ⁽²⁾Measured with 0.2% offset. ⁽³⁾See test results disclaimer ⁽⁴⁾AWS Requirement for E316-17 is 0.08% max. carbon. ⁽⁵⁾Preferred polarity is listed first.

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 SAFETY DATA SHEET (SDS) FOR THIS PRODUCT AND SPECIFIC INFORMATION PRINTED ON THE PRODUCT CONTAINER.