

SM-316L

SMAW ELECTRODE - STAINLESS STEEL

CLASSIFICATIONS :

AWS A5.4 E316L-16
ASME SFA A5.4 E316L-16
JIS Z3221 ES316L-16
BS EN ISO 1600 E 19 12 3 L R 1 2

DESCRIPTION

SM-316L is a rutile electrode. It possesses properties with a much lower carbon content which reduces susceptibility to sensitization during welding. The welds show high resistance to corrosion and fissuring. This makes it outstanding choice for critical applications. Excellent for welding stainless steel types 316, 316-L and 318.

FEATURES

Smoother arc transfer, Easier slag removal, Less Spatter.
Excellent usability in all positions welding including vertical down.
Suitable for butt and fillet welding of thin plates/sheets.
Smooth and bright weld seams, Smoother with a finer ripple bead surface.
Stable arc on AC and DC.

APPLICATIONS

Typical applications include stainless steel piping and vessels in oil and gas industry, refineries, chemical and petro-chemical plants.

CHEMICAL COMPOSITION

	%C	%Mn	%Si	%P	%S
Requirements	0.04 max	0.5 - 2.5	1 max	0.04 max	0.03 max
Typical Results	0.03	0.56	0.66	0.02	0.01
	%Ni	%Cr	%Mo	%Cu	Nb (Cb) Plus Ta
Requirements	11.0 - 14.0	17.0 - 20.0	2.0 - 3.0	0.75 max	-
Typical Results	11.3	19.6	2.51	0.09	-

MECHANICAL PROPERTIES

	Tensile Strength, Mpa	Yield Strength, Mpa	Elongation, %
Requirements	490 min	-	30 min
Typical Results	551		39

OPERATING PROCEDURES

Polarity	Current (Amps)				
	Ø2.0 mm	Ø2.6 mm	Ø3.2 mm	Ø4.0 mm	Ø5.0 mm
AC	50 - 80	75 - 115	110 - 140	160 - 200	205 - 260
DC ±	45 - 75	70 - 105	100 - 135	145 - 180	185 - 235

WELDING POSITION



NOTE

1. Rebake the electrodes at 250 ~ 300°C for 1 hour and keep it at 100 ~ 150°C prior to use.
2. Use stainless steel wire brush for cleaning of slags
3. Follow the recommended welding parameters to achieve good sound welds