

Inweld 309-16

AWS A5.4 E309-16

Chemical Composition of Inweld 309-16

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.15	22.0	12.0	0.75	0.5-2.5	0.90	0.04	0.03	---	0.75
		-25.0	-14.0							

Single values are maximum unless otherwise specified.

Description and Applications

All-Position welding of heat resistant, austenitic 25% Chromium - 12% Nickel Stainless Steel such as 309 to itself or to various grades of martensitic and ferritic stainless steels including , 316, 317, 405, 410, 430, 442, and 446. Suitable for joining dissimilar steels such as mild or carbon steel to stainless steel and for welding the clad side of 18-8 stainless clad steels. Weld deposits exhibit high strength, high resistance to cracking and oxidation resistance of temperatures as high as 2000°F. Commonly used as a “buffer” layer on steel parts where the final layer is a different grade of stainless steel. Typical uses include forgings and castings in the chemical, petrochemical, power generation, and pharmaceutical industries. Commonly used on furnace parts, kiln linings, and heat treatment containers.

Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	80,000 psi
Yield Strength:	60,000 psi
Elongation:	30%

Recommended Parameters

GMAW (DCEP – Electrode+)

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
3/32”	24-28	70-85
1/8”	26-30	85-110
5/32”	28-32	110-140
3/16”	28-32	120-160

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