

# Inweld 309

AWS A5.9 ER309

## Chemical Composition of Inweld 309

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu	Other
Balance	0.12	23.0- 25.0	12.0- 14.0	0.75	1.0- 2.5	0.30- 0.65	0.03	0.03	---	0.75	---

Single values are maximum unless otherwise specified.

## Description and Applications

ER309 is used to weld alloy 309. Occasionally, it is used to weld Type 304 and similar base metals where severe corrosion conditions exist requiring higher alloy weld metal. It is also used in dissimilar metal welds, such as joining Type 304 to carbon steel, welding the clad side of Type 304 clad steels, and applying stainless steel sheet linings to carbon steel shells.

## Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	85,000 psi
Yield Strength:	60,000 psi
Elongation:	34%

## Recommended Parameters

### GMAW

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
0.035"	16-26	70-160
0.035" (Spray)	26-31	150-230
0.045" (Spray)	28-32	180-280

### GTAW

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
1/16"	14-18	90-130
3/32"	15-20	120-175
1/8"	15-20	150-220

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