

Inweld 347

AWS A5.9 ER347

Chemical Composition of Inweld 347

Fe	C	Cr	Ni	Mo	Mn	Si	P	S	N	Cu
Balance	0.08	19.0-	9.0-	0.75	1.0-	0.30-	0.03	0.03	---	0.75
		21.5	11.0		2.5	0.65				

Single values are maximum unless otherwise specified.

Description and Applications

Inweld 347 has the addition of Cb(Nb), the possibility of inter-granular chromium carbide precipitation is reduced and thus susceptibility to inter-granular corrosion. Inweld 347 is usually used for welding alloys 321 and 347. Although Cb(Nb) is the stabilizing element usually specified in ER347, it should be recognized that tantalum Ta is also present. Ta and Cb(Nb) are almost equally effective in stabilizing carbon and in providing high-temperature strength. If dilution by the base metal produces a low ferrite or fully austenitic weld metal, the crack sensitivity of the weld may increase substantially.

Typical Weld Metal Properties

	<u>AWS Spec</u>
Tensile Strength:	100,076 psi
Yield Strength:	65,266 psi
Elongation:	45%

Recommended Parameters

GMAW (DCEP – Electrode +) 98% Ar / 2% CO₂ Mixture, Or 90% He / 2.5% CO₂ / 7.5% Ar Mixture, Or 90% Ar / 8% CO₂ / 2% O₂ Mixture

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
030"	16-24	60-180
0.035"		
0.045"	24-34	120-300
1/16"	28-36	150-350

GTAW (DCEN – Electrode +) 100% Ar 2% Thoriated, 2% Ceriated or Lanthanum Tungsten Electrode

<u>Wire Diameter</u>	<u>Voltage</u>	<u>Amperage</u>
1/16"	10-16	80-110
5/64"	12-18	100-150
3/32"	14-20	130-180
1/8"	16-24	150-220
5/32"	18-28	200-280

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