

Inweld®

Welding Alloys & Supplies



Pennsylvania
☑ 800.346.5368

North Carolina
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Aluminum

Inweld 1100

AWS/SFA 5.10 ER1100
UNS A91100

Description and Application

Inweld 1100 is a 99% aluminum filler metal for MIG and TIG welding base metals of unalloyed aluminum and provides a good color match after anodizing. Suitable for electrical applications. Highly resistant to chemical corrosion. Common applications would include base metals 1100, 3003, Aic. 3003 to similar base metals or to 1060, 1070, 1080 and 1350. Average tensile strength as welded is 13,500 psi

Typical Weld Metal Chemistry (%)

Si & Fe ☐
0.95 max
Cu ☐
0.05-0.20
Mn ☐
0.05 max
Zn ☐
0.10 max
Al ☐
Be shall not exceed 0.0008 %

Inweld 4043

AWS/SFA 5.10 ER4043
UNS A94043

Description and Application

Inweld 4043 is a 5% silicon alloyed aluminum welding wire for the welding of heat-treatable base alloys and more specifically, the 6XXX series alloys. It can also be used for joining wrought to cast materials and is less sensitive to weld cracking. Silicon in the wire increases puddle fluidity, resulting in excellent operator appeal. Inweld 4043 is also recommended for welding 3003, 3004, 5052, 6061, 6063 and casting alloys 43, 355, 356 and 214. Average tensile strength as welded is 29,000 psi.

Typical Weld Metal Chemistry (%)

Si ☐
4.5-6.0
Fe ☐
0.80 max
Cu ☐
0.30 max
Mn ☐
0.05 max
Mg ☐
0.05 max
Be shall not exceed 0.0008 %

Inweld 4047 (718)

AWS/SFA 5.10 ER4047 AWS A5.8 BAISI-4
UNS A94047

Description and Application

Inweld 4047 is a 12% silicon alloyed aluminum wire developed for aluminum brazing with a lower melting point and higher fluidity than Inweld 4043. Inweld 4047 can also be used as a welding filler metal in place of Inweld 4043 to provide increased silicon in the weld metal, which will minimize hot cracking and produce higher fillet weld shear strengths. Inweld 4047 is recommended for welding alloys 1060, 1350, 3003, 3004, 3005, 5005, 5050, 6053, 6061, 6951, 7005 and cast alloys 710.0 and 711.0.

Typical Weld Metal Chemistry (%)

Si ☐
11.0-13.0
Fe ☐
0.80 max
Cu ☐
0.30 max
Mn ☐
0.15 max
Mg ☐
0.10 max
Be shall not exceed 0.0008 %

Inweld 5183

AWS/SFA 5.10 ER5183
UNS A95183

Description and Application

Inweld 5183 was designed to weld high magnesium alloys to meet higher tensile strength requirements. Used on 5083 and 5456 base materials, when required tensile strengths are 40 Mpa (40 ksi) or greater. Typical applications are marine and cryogenic industries, and high strength structural aluminum fabrication. Average tensile strength as welded is 41,000 psi.

Typical Weld Metal Chemistry (%)

Si ☐
0.40 max
Fe ☐
0.40 max
Cu ☐
0.10 max
Mn ☐
0.5-1.0
Mg ☐
4.3-5.2
*Be shall not exceed 0.0008 %

Inweld 5356

AWS/SFA 5.10 ER5356
UNS A95356

Description and Application

Inweld 5356 is a 5% magnesium alloyed aluminum welding wire. A great general purpose filler alloy, designed for the welding of 5XXX series alloys, when 276 Mpa (40 ksi) tensile strength is not required. Excellent color match after anodizing. Inweld 5356 offers much better corrosion resistance when exposed to salt water. Average tensile strength as welded is 38,000 psi.

Typical Weld Metal Chemistry (%)

Si ☐
0.25 max
Fe ☐
0.40 max
Cu ☐
0.10 max
Mn ☐
0.05-0.20
Mg ☐
4.5-5.5
*Be shall not exceed 0.0008 %

Inweld 5556

AWS/SFA 5.10 ER5556
UNS A95556

Description and Application

Inweld 5556 contains increased amounts of magnesium and manganese. This gives Inweld 5556 good ductility and improved crack resistance. Provides weld deposits matching tensile strengths for the 5XXX alloys, such as 5083 and 5456. The ultimate tensile strength will be approximately 46,000 psi.

Typical Weld Metal Chemistry (%)

Si ☐
0.25 max
Fe ☐
0.40 max
Cu ☐
0.10 max
Mn ☐
0.50-1.00
Mg ☐
4.70-5.50
*Be shall not exceed 0.0008 %

