

ALUMINUM

MIG WIRES / TIG RODS (GMAW/GTAW)

ALMIGWELD 5556

Alloy 5556 was first utilized in 1956. It develops the highest as-welded strengths in fillet welds and it is nearly double that of 4043. The 5Xxx Series Of Alloys offer an Excellent Combination of Corrosion Resistance, Strength, Toughness, Workability, and Weldability. As a result, they are used in a wide variety of Applications. A Characteristic of this series of Alloys, However, is their susceptibility to stress corrosion cracking when the weld pool chemistry is greater than 3% Mg and there is exposure to prolonged temperatures in excess of 150° F. Special Alloys and Tempers are often required to overcome this problem. Contact Alcotec for assistance in Alloy/Temper selection.

Specifications	
Classifications	ANSI/AWS A5.10 : (ER & R)
Approvals	ABS ClassNK CWB DNV KR LR

Approvals are based on factory location. Please contact ESAB for more information.

Alloy Type	Aluminum
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Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
Base Alloy 5456-H112			
As Welded	159 MPa (23 ksi)	310 MPa (45 ksi)	14 %
5456-H112			
Base Alloy	165 MPa (24 ksi)	317 MPa (46 ksi)	22 %

Typical Wire Composition %							
Mn	Si	Cr	Cu	Ti	Zn	Fe	Mg
0.7	0.05	0.10	0.01	0.080	0.005	0.12	5.2

Recommended Welding Parameters		
Current	Wire Diameter	Voltage
100-130 A	0.8 mm (0.030 in.)	18-22 V
125-150 A	0.8 mm (0.030 in.)	20-24 V
85-120 A	0.9 mm (0.035 in.)	20-23 V
125-150 A	0.9 mm (0.035 in.)	20-24 V
170-190 A	0.9 mm (0.035 in.)	21-26 V
140-260 A	1.2 mm (0.047 in.)	20-29 V
125-150 A	1.2 mm (0.047 in.)	20-24 V
180-210 A	1.2 mm (0.047 in.)	22-26 V
170-240 A	1.2 mm (0.047 in.)	24-28 V
140-300 A	1.2 mm (0.047 in.)	20-29 V
190-350 A	1.6 mm (1/16 in.)	25-30 V
240-300 A	1.6 mm (1/16 in.)	22-27 V
190-260 A	1.6 mm (1/16 in.)	21-26 V
290-340 A	1.6 mm (1/16 in.)	26-30 V
260-310 A	1.6 mm (1/16 in.)	22-27 V
280-320 A	1.6 mm (1/16 in.)	24-28 V
300-400 A	2.4 mm (3/32 in.)	26-32 V
280-360 A	2.4 mm (3/32 in.)	26-30 V