

OK Autrod 5183

OK Autrod 5183 was developed to provide the highest strengths possible in the as welded condition of alloy AA 5083 and other similar high magnesium alloys. The more common 5356 grade will typically fail to meet the as-welded tensile requirements of AA 5083. The alloy is typically utilised in marine and structural applications where high strengths, high fracture toughness for impact resistance and exposure to corrosive elements are important. The alloy is not recommended for elevated temperature applications due to its susceptibility to stress corrosion cracking. The alloy is non-heat treatable.

Specifications	
Classifications	SFA/AWS A5.10 : ER5183 EN ISO 18273 : S Al 5183 (AlMg _{4,5} Mn _{0,7} (A))
Approvals	NAKS/HAKC : 1.2-1.6 mm ABS : ER5183 BV : WC CE : EN 13479 ClassNK : KAI5RCG(I-1)(I-4) CWB : AWS A5.10/A5.10M: ER5183 DB : 61.039.03 DNV-GL : 5183 JIS : Z 3232 LR : WC1/I-1 RINA : WC VdTÜV : 04666

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

Alloy Type	AlMgMn
Shielding Gas	I1, I3 (EN ISO 14175)

Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
As Welded	140 MPa	290 MPa	25 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	20 °C	90 J

Typical Wire Composition %								
Mn	Si	Cr	Al	Cu	Ti	Zn	Fe	Mg
0.65	0.04	0.08	94.20	0.01	0.10	0.01	0.13	4.90

Deposition Data		
Diameter	Current	Voltage
1.0 mm	90-210 A	15-26 V
1.2 mm	140-260 A	20-29 V
1.6 mm	190-350 A	25-30 V

Recommended Welding Parameters		
Current	Wire Diameter	Voltage
90-275 A	1.0 mm	15-26 V
140-300 A	1.2 mm	20-29 V
190-350 A	1.6 mm	25-30 V