

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 OK Autrod 5356 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.

Classifications Wire Electrode	SFA/AWS A5.10 : ER5183 EN ISO 18273 : S Al 5183 (AlMg4 5Mn0 7(A)) JIS Z 3232 : A5183
Approvals	ABS ER 5183 BV WC CE EN 13479 ClassNK KA15FCG(I-1)(I-4) CWB ER5183 DB 61.039.03 DNV-GL 5183 JIS JIS Z 3232 LR WC1/I-1 WC1/I-3 NAKS/HAKC 1.2-1.6mm RINA WC (*) VdTÜV 04666

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

Alloy Type	AlMgMn
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Typical Charpy V-Notch Properties

Testing Temperature	Impact Value
20 °C (68 °F)	90 J (66 ft-lb)

Typical Wire Composition %

Mn	Si	Cr	Al	Cu	Ti	Fe	Mg	Zn
0.65	0.04	0.08	94.200	0.01	0.100	0.13	4.9	0.01

Deposition Data

Diameter	Current	Voltage
0.8 mm (.030 in.)	60-170 A	13-24 V
1.0 mm (.040 in.)	90-210 A	15-26 V
1.2 mm (.045 in.)	140-260 A	20-29 V
1.6 mm (1/16 in.)	190-350 A	25-30 V
2.4 mm (3/32 in.)	280-400 A	26-31 V

Recommended Welding Parameters

Wire Diameter	Current	Voltage
1.0 mm (0.040 in.)	90-210 A	15-26 V
1.2 mm (0.047 in.)	140-260 A	20-29 V
1.2 mm (0.047 in.)	125-150 A	20-24 V
1.2 mm (0.047 in.)	180-210 A	22-26 V
1.2 mm (0.047 in.)	170-240 A	24-28 V
1.6 mm (1/16 in.)	190-350 A	25-30 V
1.6 mm (1/16 in.)	240-300 A	22-27 V



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Recommended Welding Parameters

Wire Diameter	Current	Voltage
1.6 mm (1/16 in.)	260-310 A	22-27 V
1.6 mm (1/16 in.)	190-260 A	21-26 V
1.6 mm (1/16 in.)	290-340 A	26-30 V
1.6 mm (1/16 in.)	280-320 A	24-28 V