

ES MIG 5183

GMAW
ER5183

ESWECO
The Art of Welding

Description

ES MIG 5183 is designed to provide the highest possible strength in the as-welded condition of alloy AA 5083 and similar high-magnesium alloys. The more common ES MIG 5356 typically fails to meet the as-welded tensile requirements of AA 5083. The alloy is typically used in marine and structural applications where high strength, 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.

Current

DC+

Classifications

SFA/AWS A5.10 ER5183
EN ISO 18273 S Al 5183 (AlMg4.5Mn0.7(A))

Typical all weld metal composition, %

Si	Mn	Cr	Cu	Fe	Ti	Zn	Mg
<0.25	0.8	0.15	<0.10	<0.4	<0.15	<0.25	4.8

Typical mech. Properties all weld metal

Yield stress, MPa	140
Tensile strength, MPa	290
Elongation, %	25

Charpy V

Test temps, °C	Impact values, J
+20	30

Welding parameters

Diameter, mm	Wire feed, m/min	Welding current, A	Arc voltage, V
1.0	7-14	90-210	15-26
1.2	6-13	140-260	20-29
1.6	4.5-7.5	190-350	25-30
2.4	3.5-5	280-400	26-31