

AX-5183

AX-AlMg4.5Mn

Standard

EN ISO 18273	S Al 5183 (AlMg4.5Mn)
Material number	3.3548
AWS A 5.10	ER5183

Area of application

Filler rod/wire electrode of aluminium-magnesium alloy for TIG or MIG welding of aluminium alloys.

Special hints

Weld seam area must be metallic bright. With large workpieces and wall thicknesses above 15mm, preheat the area of the welding groove to 150°C-200°C. When welding age-hardenable alloys, do not place the welding seam in the mechanically highly loaded areas.

Typical analysis in %

Al	Mg	Mn	Cr	Ti			
Basis	4.9	0.8	0.15	0.15			

Important base materials

EN AW-5083 (AlMg4.5Mn0.7), EN AW-5019 (AlMg5), EN AW-6005A (AlSiMg(A)), EN AW-6061 (AlMg1SiCu), EN AW-6082 (AlSi1MgMn), EN AW-7020 (AlZn4,5Mg1), EN AC 51300 (G-AlMg5), EN AC-51400 (G-AlMg5Si)

Material properties

Welding process	TIG/MIG	Mechanical properties of the weld metal as per DIN EN 1732-3
Shielding gas	argon I1 at	
Test temperature	20°C	
0.2%-yield strength ($R_{p0.2}$)	[MPa]	130
Tensile strength R_m	[MPa]	280
Elongation A ($L_0 = 5d_0$) %	[%]	18
Electrical conductivity	[S*m/mm ²]	16-19
Thermal conductivity	[W/(m*K)]	110-120
Thermal expansion coefficient	[1/K]	23.7*10 ⁻⁶

Applicable shielding gases (EN ISO 14175)

TIG: argon I1, MIG: argon I1 and argon-helium mixtures I3

Approval

(Request current scope if required)

Product forms (as per EN ISO 544) (other dimensions available on request)

Spools	Ø mm	0.8	1.0	1.2	1.6	2.4	
Rods	Ø mm x 1000 mm	1.6	2.0	2.4	3.2	4.0	5.0