

Aluminium alloy DE54 - S AL 3103 - AlMn1

Reference analysis in wt. %			
Si	≤ 0,50	Zn	≤ 0,20
Fe	≤ 0,7	Ti + Zr	≤ 0,10
Cu	≤ 0,10	Be	≤ 0,0003
Mn	0,9 - 1,5	others each	≤ 0,05
Mg	≤ 0,30	others together	max. 0,15
Cr	≤ 0,10	Al	Rest

Standard designation

DIN EN ISO 18273 S AL 3103 (AlMn1)

Base materials

Suitable for joint welding of aluminium alloys from 3000 and 5000 series.

Additional information

A high level of corrosion resistance, formability and weldability.

Physical properties (guideline values, partly calculated)

Modulus of elasticity [MPa]	69500
Heat conductivity at 20°C [W/(mK)]	160 - 200
Coefficient of expansion (20°-100°C) [10 ⁻⁶ /K]	23,5*10 ⁻⁶
Melting range [°C]	645 - 655
Electrical conductivity [m/Ω*mm ²]	22 - 28
Density [g/cm ³]	2,73

Mechanical properties (guideline values, without dilution)

Yield strength R _{p0,2} [MPa]	≥ 35
Tensile strength R _m [MPa]	≥ 90
Elongation A ₅ [%]	≥ 24
Test temperature [°C]	20

Welding positions

PA, PB, PC, PF

Shielding gas

I1, I2, I3 (argon, helium or argon/helium-mixture)

Polarity

MIG =+, TIG ~

Approvals

Dimensions Ø

MIG - wires [mm]	0,80 - 2,40
TIG - rods [mm]	1,6 - 6,0

Forms of supply - spools and rods

Standard spools: S 300 / B 300 / BS 300	max. 6,0 kg / max. 7,0 kg / max. 7,0 kg
Special spools: B 435 / B 400	max. 14 kg / max. 40 kg
Small spools: S 100 / S 200	0,5 kg / 2,0 kg
Drums: Ø 500 x 800 mm / Ø 580 x 890 mm	max. 80 kg / max. 140 kg
TIG - rods: 1000 mm	2,5 kg / 5 kg / 10 kg