

## Aluminium alloy DE50 - S AL 1098 - Al99,98

Reference analysis in wt. %			
Si	≤ 0,010	Ti	≤ 0,003
Fe	≤ 0,006	others each	≤ 0,003
Cu	≤ 0,003	Al	min. 99,98
Zn	≤ 0,015		
Standard designation			
DIN EN ISO 18273 (not standardised, closed to DIN)		S AL 1098 (Al99,98)	
Base materials			
Suitable for joint welding of aluminium alloys from 1000, 3000 and 5000 series.			
Additional information			
To avoid hot cracks you have add titanium.			
Physical properties (guideline values, partly calculated)			
Modulus of elasticity [MPa]			70000
Heat conductivity at 20°C [W/(m*K)]			232
Coefficient of expansion (20°-100°C) [m/K]			23,5 *10 <sup>-6</sup>
Melting range [°C]			660
Electrical conductivity [m/Ω*mm <sup>2</sup> ]			37,5 - 37,7
Density [g/cm <sup>3</sup> ]			2,70
Mechanical properties (guideline values, without dilution)			
Yield strength R <sub>p0,2</sub> [MPa]			-
Tensile strength R <sub>m</sub> [MPa]			≥ 40
Elongation A <sub>5</sub> [%]			≥ 43
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			
TÜV			
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