

## Aluminium alloy DE61 - S AL 4046 - AlSi10Mg

Reference analysis in wt. %			
Si	9,0 - 11,0	Ti	≤ 0,15
Fe	≤ 0,50	Be	≤ 0,0003
Cu	≤ 0,03	others each	≤ 0,05
Mn	≤ 0,40	others together	max. 0,15
Mg	0,20 - 0,50	Al	Rest
Zn	≤ 0,10		

### Standard designation

DIN EN ISO 18273 S AL 4046 (AlSi10Mg)

### Base materials

Suitable for joint welding of aluminium alloys from 3000, 5000 and 6000 series.

### Additional information

High stability. High weldability.

### Physical properties (guideline values, partly calculated)

Modulus of elasticity [MPa]	74000
Heat conductivity at 20°C [W/(mK)]	150 - 170
Coefficient of expansion (20°-100°C) [10 <sup>-6</sup> /K]	21*10 <sup>-6</sup>
Melting range [°C]	570 - 610
Electrical conductivity [m/Ω*mm <sup>2</sup> ]	19 - 25
Density [g/cm <sup>3</sup> ]	2,65

### Mechanical properties (guideline values, without dilution)

Yield strength R <sub>p0,2</sub> [MPa]	≥ 70
Tensile strength R <sub>m</sub> [MPa]	≥ 140
Elongation A <sub>5</sub> [%]	≥ 4
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

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### 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