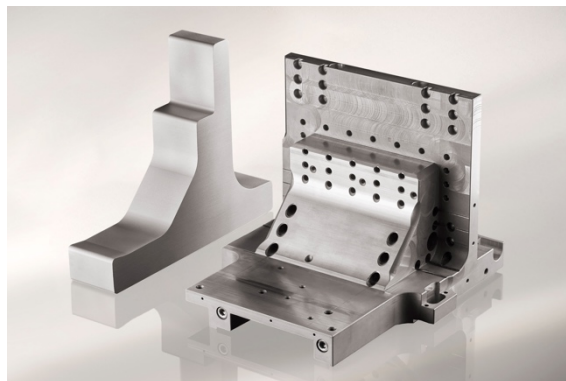


Dispal[®] S260

The physical and mechanical properties depend on geometry and the production process. All mechanical properties are preliminary minimal values (average minus 3 Sigma) taken from specimen Ø30mm and for all other geometries only for reference.



Physical properties (at 20°C)

Property	Unit	Value
Density	g/cm ³	2.66 ± 5%
Electrical conductivity	MS/m	14.4 ± 0.5
	%IACS	24.8 ± 0.9
Heat capacity	J/gK	0.88 ± 0.02

Coefficient of thermal expansion

Property	Unit	Value
CTE-value 20 to 100°C	10 ⁻⁶ /K	17.2 ± 0.5
CTE-value 20 to 200°C	10 ⁻⁶ /K	18.0 ± 0.5
CTE-value 20 to 300°C	10 ⁻⁶ /K	18.8 ± 0.5

Thermal conductivity

Temperature (°C)	30	100	200	300	400
Value (W/mK)	135.5	132.7	131.5	131.9	124.1

Thermal data

Solidus temperature = (507.1 ± 3)°C

Liquidus temperature = (775.1 ± 3)°C

Mechanical properties Heat treatment condition F: (minimum values)

Property	Unit	Temperature		
		20°C	200°C	300°C
Tensile strength, Rm	MPa	265	205	87
Yield strength, Rp0,2	MPa	180	144	67
Elongation, A5	%	1.0	2.3	15.3
Young's modulus, E	GPa	85	53	48
Hardness	HV30	110	-	-

Exemplary values Heat treatment condition F (mean values)

Shear modulus, G = 35 – 31 GPa

Poisson's ratio, μ = 0,277 – 0,282

Fatigue strength Heat treatment condition F

P50% rotary bending values for 5×10^7 cycles at 20°C

σ_{bW} = 189.1 MPa

Mechanical properties Heat treatment condition T6¹ and T7¹ (minimum values)

Property	Unit	Condition T6		Condition T7	
		T= 20°C	T= 150°C	T= 20°C	T= 150°C
Tensile strength, Rm	MPa	448	398	421	364
Yield strength, Rp0,2	MPa	396	362	378	329
Elongation, A5	%	0.4	0.6	0.55	0.8
Young's modulus, E	GPa	95	81	92	80
Hardness	HV30	190	-	168	-

Fatigue strength Heat treatment condition T6¹ and T7¹

P50% rotary bending values for 5×10^7 cycles

Property	Unit	Condition T6		Condition T7	
		T= 20°C	T= 150°C	T= 20°C	T= 150°C
σ_{bW}	MPa	220.9	98.4	206.5	101.5

¹ Quenching in water at room temperature.