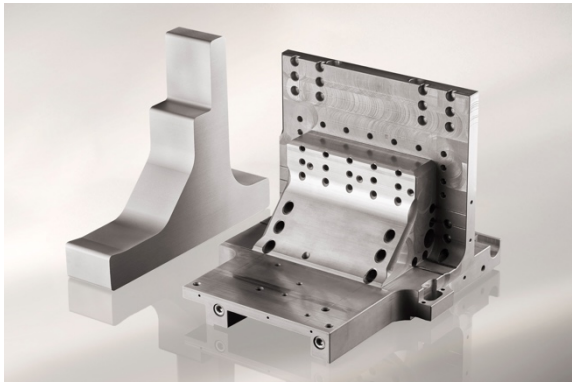
GRÄNGES

Dispal® S232

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/cm³	2.79 ± 5%
Electrical conductivity	MS/m	12.8 ± 0.5
	%IACS	22.1 ± 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	18.4 ± 0.5
CTE-value 20 to 200°C	10-6/K	19.0 ± 0.5
CTE-value 20 to 300°C	10-6/K	19,8 ± 0.5

Thermal conductivity

Temperature (°C)	30	100	200	300	400
Value (W/mK)	116.8	117.9	122.1	131.7	125.7

Thermal data

Solidus temperature = (518.9 ± 3)°C
Liquidus temperature = (734.5 ± 3)°C

Mechanical properties Heat treatment condition T6x[1]: (minimum values)

Property	Unit	Temperature		
		20°C	150°C	200°C
Tensile strength, Rm	MPa	470	411	314
Yield strength, Rp0,2	MPa	405	362	260
Elongation, A5	%	1.0	1.6	4.1
Young's modulus, E	GPa	88	80	76
Hardness	HV30	170	-	-

Exemplary values Heat treatment condition T6x[1] (mean values)

Shear modulus, G = 35 – 31 GPa
Poisson's ratio, μ = 0,332 – 0,343

Fatigue strength Heat treatment condition T6x[1]

P50% rotary bending values for $5x10^7$ cycles
σ bW = 225.4 MPa

[1] Quenching in water at room temperature.