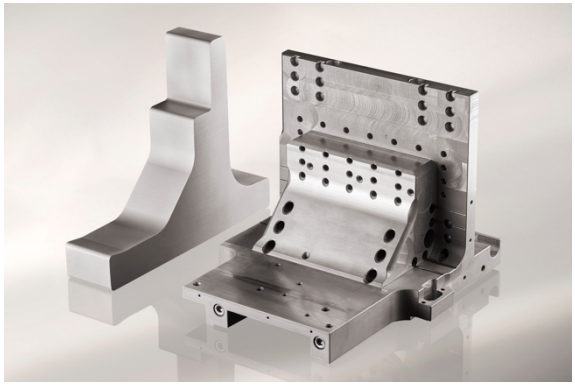
GRÄNGES

Dispal® S220

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	2.54 ± 5%
Electrical conductivity	MS/m	15.7 ± 0.5
	%IACS	27.1 ± 0.9
Heat capacity	J/gK	0.85 ± 0.02

Coefficient of thermal expansion

Property	Unit	Value
CTE-value 20 to 100°C	10-6/K	15.1 ± 0.5
CTE-value 20 to 200°C	10-6/K	16.0 ± 0.5
CTE-value 20 to 300°C	10-6/K	16.8 ± 0.5

Thermal conductivity

Temperature (°C)	30	100	200	300	400
Value (W/mK)	152.4	144.3	136.8	131.0	123.5

Thermal data

Solidus temperature = (575.9 ± 3)°C
Liquidus temperature = (878.8 ± 3)°C

Mechanical properties Heat treatment condition F and O: (minimum values)

Property	Unit	Condition **F** T= 20°C	Condition **F** T= 150°C	Condition **O** T = 20°C
Tensile strength, Rm	MPa	165	128	140
Yield strength, Rp0,2	MPa	95	76	80
Elongation, A5	%	2.5	8.4	2.0
Young's modulus, E	GPa	85	76	80
Hardness	HV30	65	-	58

Exemplary values in condition F (mean values)

Shear modulus, G = 36 – 33 GPa
Poisson's ratio, μ = 0,275 – 0,284