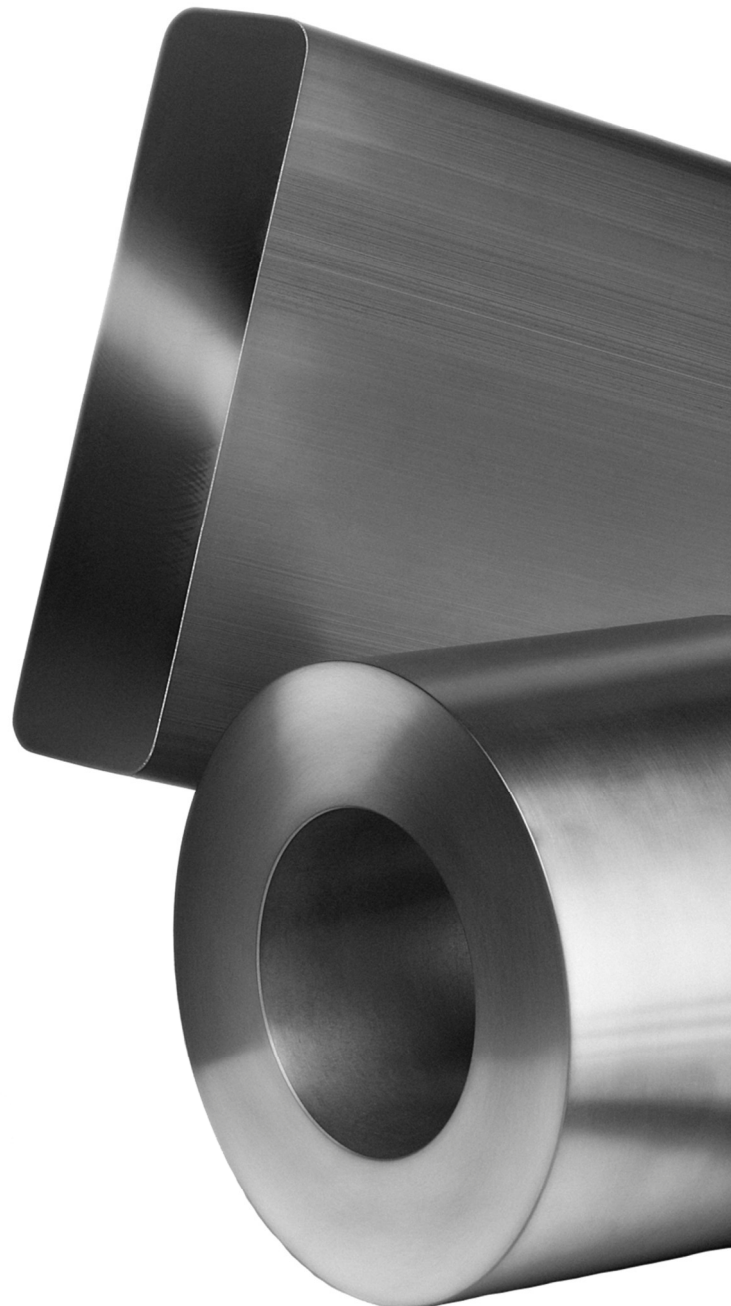
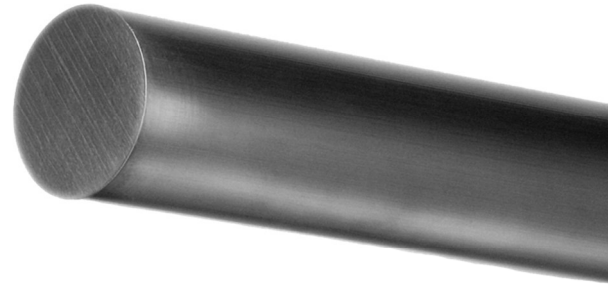


DATA SHEET: GPM-4.3.0-DB-004 Rev. 00 (replaced P-4.3-DB-004)

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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	2.58 ± 5%
Electrical conductivity	MS/m	11.8 ± 0.5
	%IACS	20.3 ± 0.9
Heat capacity	J/gK	

THERMAL CONDUCTIVITY

Temperature (°C)	30	100	200	300	400
Value (W/mK)	126.6	120.0	115.0	110.4	103.7

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	17.0 ± 0.5

THERMAL DATA'S

Solidus temperature = (570.2 ± 3)°C

Liquidus temperature = (900.0 ± 3)°C

MECHANICAL PROPERTIES

HEAT TREATMENT CONDITION F: (minimum values)

Property	Unit	Temperature					
		20°C	100°C	150°C	200°C	250°C	300°C
Tensile strength, Rm	MPa	218		180	154	116	97
Yield strength, Rp0,2	MPa	128		105	86	71	60
Elongation, A5	%	1.0		1.9	2.0	3.2	5.9
Young's modulus, E	GPa	86		77	66	65	64
Hardness	HV30	85	-	-	-	-	-

EXEMPLARY VALUES IN CONDITION F: (mean values)

Shear modulus, G	GPa	39	38	37	37	36	34
Poisson's ratio, μ		0.264	0.267	0.268	0.269	0.270	0.274

FATIGUE STRENGTH IN CONDITION F: (P50% rotary bending values for 5x10⁷ cycles)

Property	Unit	Temperature					
		20°C	100°C	150°C	200°C	250°C	300°C
σ bW	MPa						