

Short description of Material:

Calaumid 1200 is produced in a pressureless static casting process through an anionic reaction. This method produces a high molecular, high crystalline material with relatively little stress. It has good wear resistance and good dimensional stability.

Colours: natural, black

Application examples:

- gears
- sprockets
- pump wheels and housings
- mixing blades
- boat propellers
- idler wheels, guide rollers, sheaves
- cams

Mechanical values		dry / humid	
Density	ISO 1183	1,03	g / cm ³
Yield stress	ISO 527	60 / 50	MPa
Elongation due to tearing	ISO 527	55 / 120	%
Modulus of elasticity resulting from tensile test	ISO 527	2.200 / 1.800	MPa
Modulus of elasticity resulting from bending test	ISO 178	2.400 / -	MPa
Flexural strength	ISO 178	90 / -	MPa
Impact strength ¹⁾	ISO 179	o.B.	kJ/m ²
Notched-bar impact strength	ISO 179	> 15	kJ/m ²
Ball indentation hardness H _{358/30}	ISO 2039-1	- / 100	MPa
Creep rate stress at 1% elongation ²⁾	DIN 53 444	> 11	MPa
Sliding friction coefficient against steel (dry running) ³⁾	—	0,40	—
Sliding wear against steel (dry running) ³⁾	—	-	µm/km
Thermal values			
Melting temperature	ISO 3146	+ 190	°C
Thermal conductivity	DIN 52 612	0,23	W/(K·m)
Specific thermal capacity	—	1,7	J/(g·K)
Coefficient of linear expansion ⁴⁾	—	10 - 11	10 ⁻⁵ ·K ⁻¹
Operating temperature range (long-term) ⁵⁾	—	- 60 / + 110	°C
Operating temperature range (short-term) ⁵⁾	—	+ 150	°C
Fire behaviour	UL 94	HB	—
Electrical values			
Dielectric constant ⁶⁾	IEC 250	3,7	—
Dielectric loss factor ⁶⁾	IEC 250	0,03	—
Specific volume resistance	IEC 93	10¹⁵ / 10¹²	Ω·cm
Surface resistance	IEC 93	10¹³ / 10¹²	Ω
Dielectric strength	IEC 243	50 / 20	KV/mm
Creep current resistance	IEC 112	KA 3c / KA 3b	—
Miscellaneous data			
Moisture absorption in normal climate until saturated	DIN 53 715	0,9	%
Water absorption until saturated	ISO 62	1,4	%

¹⁾: Measured with a pendulum impact testing machine 0,1 DIN 51 222
²⁾: Tension resulting in 1% total elongation after 1.000 h
³⁾: against steel, hardened and ground , P = 0,05 MPa, V = 0,6 m/s, t = 60 °C near running surface
⁴⁾: For a temperature range of + 23 °C to + 60 °C
⁵⁾: Experience values established with finished parts that are not under any stress in heated air, depending on the type and form of heat exposure, short-term = max. 1 h, long-term = months
⁶⁾: at 10⁶ Hz

w.b. = without breakage
 1 MPa = 1 N/mm²
 1 g/cm³ = 1.000 kg/m³
 1 kV/mm = 1 MV/m

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