



Nylon Cast 6 Black

PA6C (Cast Polyamide 6)

Colour: Black

Fillers: Molybdenum Disulfide

Density: 1.15g/cm³

Material Data Sheet

Mechanical Properties	Parameter	Value	Unit	DIN/EN/ISO
Modulus of elasticity (tensile test)	1mm/min	3200	MPa	527-2
Tensile strength	50mm/min	82	MPa	527-2
Tensile strength at yield	50mm/min	80	MPa	527-2
Elongation at Yield	50mm/min	4	%	527-2
Elongation at break	50mm/min	55	%	527-2
Flexural strength	2mm/min 10N	102	MPa	178
Modulus of elasticity (flexural test)	2mm/min 10N	3000	MPa	178
Compression Strength	1%/2% 5mm/min 10N	22/38	MPa	604
Compression modulus	5mm/min 10N	2800	MPa	604
Impact strength (Charpy)	Max. 7,5J	N.B.	kJ/m ²	179-1eU
Notched impact strength (Charpy)	Max. 7,5J	4	kJ/m ²	179-1eA
Ball indentation hardness	-	170	MPa	2039-1

Thermal Properties	Parameter	Value	Unit	DIN/EN/ISO
Glass transition temperature	-	43	°C	53765
Melting temperature	-	217	°C	53765
Service temperature	Short term	170	°C	-
Service temperature	Long term	100	°C	-
Thermal expansion (CLTE)	23-60°C, Long	11	10 ⁻⁵ K ⁻¹	11359-1;2
Thermal expansion (CLTE)	23-100°C, Long	11	10 ⁻⁵ K ⁻¹	11359-1;2
Specific heat	-	1.6	J/(g*K)	22007-4:2008
Thermal conductivity	-	0.33	W/(K*m)	22007-4:2008

Electrical properties	Parameter	Value	Unit	DIN/IEC
Surface resistance	-	>10 ¹²	Ω	60093

Other properties	Parameter	Value	Unit	DIN/EN/ISO/IEC
Water absorption	24h/96h (23°C)	0.2/0.5	%	62
Resistance to hot water/bases	-	(+)	-	-
Resistance to weathering	-	(+)	-	-
Flammability (UL94)	Corresponding to	HB	-	60695-11-10

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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.