

TECHNICAL DATA SHEET

Torque PD30 UF00 BK04 FR030

PA6 UNFILLED BLACK HALOGEN FREE FLAME RETARDANT

injection moulding grade, cylindrical or flat granuls

Properties	Test method	Unit	Condition	Values
ISO Shortname	ISO 16396	-	-	PA6 , FR030
Density	ISO 1183	g/cm ³		1,18
Viscosity Number (VN)	ISO 307	ml/gr	%0,5(m/v) in %96 (m/m) H2SO4	140 - 150
Ash Content	ISO 3451	%	750°C 30 min	-
Water absorption	ISO 62	%	saturation in water 23 °C	7,5
Water absorption,(Equilibrium value)	ISO 62	%	50% RH, 23 °C	2,1
Mechanical properties				
Tensile Modulus	ISO 527-2	MPa	23°C	3000
Young Modulus	ISO 527-2	MPa	23°C	3500
Tensile Strenght at Break	ISO 527-2	MPa	23°C	70,0
Tensile Strenght at Yield	ISO 527-2	Mpa	23°C	60,0
Elongation at Break	ISO 527-2	%	23°C	20,0
Elongation at Yield	ISO 527-2	%	23°C	> 2,0
Flexural modulus	ISO 178-A	Mpa	23°C	2700
Flexural Strength	ISO 178-A	Mpa	23°C	85
Charpy notched impact strenght	ISO 179-1eA	kJ/m ²	23°C	4,5
Charpy notched impact strenght	ISO 179-1eA	kJ/m ²	-30°C	4,0
Charpy unnotched	ISO 179-1eU	kJ/m ²	23°C	40,0
Charpy unnotched impact strenght	ISO 179-1eU	kJ/m ²	-30°C	30,0
Izod notched impact impact strenght	ISO 180/1A	kJ/m ²	23°C	-
Izod notched impact impact strenght	ISO 180/1A	kJ/m ²	-30°C	-

Thermal Properties				
Vicat softening temperature	ISO 306	°C	50 N - 50 °C/h	200
Deflection temperature 1.8 MPa (HDT A)	ISO 75-1-12	°C	1,80 Mpa	66
Deflection temperature 0.45 MPa (HDT B)	ISO 75-1-12	°C	0,45 Mpa	162
Flammability				
Flame Rating	UL94	class	0,75 mm	V0
Flame Rating	UL94	class	1,6 mm	V0
Flame Rating	UL94	class	3,2 mm	V0
GWFI (<i>Glow Wire Flammability Index</i>)	IEC 60695	°C	1 mm	960
GWFI (<i>Glow Wire Flammability Index</i>)	IEC 60695	°C	2 mm	960
GWIT (<i>Glow Wire Ignitability Index</i>)	IEC 60695	°C	1,5 mm	-
Electrical properties				
Comparative tracking index, CTI	IEC 60112	V	3 mm-Solution A	-
Volume resistivity	IEC 60093	ohm*m	dry	1E+13
Surface resistivity	IEC 60093	ohm	dry	1E+14
Processing				
Melting Temperature, DSC	ISO 11357-1/-3	°C	-	220
MVR(Melt Volume Rate)	ISO 1133	cm ³ /10 min	260 °C/ 5 kg	-
Drying temperature dry air dryer	-	°C	-	-
Drying time dry air dryer	-	h	-	2-4
Residual moisture content	ISO 15512	%	-	<0,2
Melt Temperature, for processing	-	°C	-	220 - 240
Screw Design	-	-	-	universal
Mould Temperature, injection moulding	-	°C	-	40-80
Moulding shrinkage (parallel)	ISO 294-4	%	2 mm	1,0
Moulding shrinkage (normal)	ISO 294-4	%	2mm	1,2

Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the coloring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.