PRODUCT INFORMATION

TAROLOX 10 G3

PBT medium viscosity 15% glass fibres reinforced, good flow, good surface appearance, good mechanical and thermal properties, good dimensional stability.

ISO short	ISO 1043: PBT-GF15
Form	Pellets

Key Features

- High stiffness
- Designed for injection moulding applications
- Glass fibres reinforced
- Good flowability
- Good dimensional stability

Availability

- W: lubricated
- LP: laser printable
- L: UV stabilized
- H: heat stabilized
- All colours

Process

- INJECTION MOULDING

Application

- Power tools
- Household
- Furniture
- Electronic
- Electrical
- Consumer
- Automotive

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	>10E(15)		
Dielectric Strength	IEC 60243-1	kV/mm	21	2 mm	
Dissipation Factor Frequency	IEC 60250	-	0,020	1 MHz	
Dielectric Constant	IEC 60250	-	3,4	1 MHz	
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	500		
Tracking Resistance (CTI - Method B)	IEC 60112	Volt	175M		
PHYSICAL					

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Density (+23°C)	ISO 1183	g/cm^3	1,40	
Filler content	ISO 3451	%	15	750°C - 1 h
Granule Humidity	Internal method	%	<0,05	
Water Absorption (24h / +23°C)	ISO 62	%	0,05	
Water Absorption at Saturation	ISO 62	%	0,3	
Mould Shrinkage (Parallel)	Internal method	%	0,5 - 0,8	
Mould Shrinkage (Normal)	Internal method	%	0,8 - 1,0	
Melting temperature (DSC)	ISO 11357	°C	225	
Melt Flow Rate (MFR)	ISO 1133	g/10 min	25	250°C - 2,16 kg
MECHANICAL				
Tensile Modulus	ISO 527-1,2	MPa	5800	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	4	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	95	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	5500	Speed 1 mm/min
Flexural Break Strength	ISO 178	MPa	145	Speed 1 mm/min
IZOD Notched Impact (+23°C)	ASTM D256	J/m	60	
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	5	
THERMAL				
Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	210	50°C / h
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	205	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	200	120°C / h
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	215	120°C / h
Ball Pressure Test	IEC 60695-10-2	°C	185	
Continuous service temperature (20.000 h)	UL746 B	°C	90 (130 H)	
Continuous service temperature (short term)	UL746 B	°C	130 (180 H)	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	3,5x10exp(-5)	-30°C /+30°C
FLAMMABILITY				

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Flame Behaviour (0,97 mm)	UL94	Class	HB
Flame Behaviour (1,6 mm)	UL94	Class	HB
Flame Behaviour (3,2 mm)	UL94	Class	HB
Glow Wire Flammability Index-GWFI (2 mm)	IEC 60695-2-12	°C	750
Oxigen index	ASTM D2863	%	20

INJECTION MOULDING	Value
Drying Temperature (Circulating Air Oven)	80 - 120°C
Drying Temperature (Desiccant Dryer)	80 - 120°C
Drying Time (Circulating Air Oven)	3 - 6 h
Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	< 0,04
Suggested Max Regrind	< 20%
Melt Temperature	250 - 270°C
Feed Temperature	60°C
Rear Temperature	235°C
Middle Temperature	245°C
Front Temperature	255°C
Nozzle Temperature	260°C
Mould Temperature	60 - 100°C
Injection Rate	Medium to Fast
Injection Pressure	40 - 100 MPa
Packing Pressure	30 - 80 MPa
Back Pressure	0,5 - 1 MPa
Screw Revolving Speed	70 rpm @ Diameter 60 mm
Screw Revolving Speed	95 rpm @ Diameter 45 mm
Screw Revolving Speed	140 rpm @ Diameter 30 mm
Screw Revolving Speed	220 rpm @ Diameter 20 mm
Screw Revolving Speed	300 rpm @ Diameter 15 mm
Cushion	2 - 6 mm
Screw L/D Ratio	18 - 22
Screw Compression Ratio	2 - 2,5
Vent Depth	0,02 mm

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Notes During processing, a dehumidifying hopper dryer is recommended at a temperature of 60 to 80°C.