PRODUCT INFORMATION

TAROLOX 10 G4 X0

PBT medium viscosity 20% glass fibres reinforced, flame retardant UL94 V0, good flow, good surface appearance, good mechanical and thermal properties, high dimensional stability.

ISO short	ISO 1043: PBT-GF20 FR(17)
Form	Pellets
UL file	E143048

Key Features

- Good impact - stiffness balance
- Light natural colour
- Designed for injection moulding applications
- Glass fibres reinforced
- Flame retardant
- Good flowability
- Good dimensional stability

Availability

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

Compliance

- UL94 V0 approved all colours at 0,97 mm. UL746 B approved. IMQ T180 approved for lampholders.

Process

- INJECTION MOULDING

Application

- Power tools
- Household
- Electronic
- Electrical
- Connectors
- Building
- Automotive

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	> 10E15		
Dielectric Strength	IEC 60243-1	kV/mm	24	2 mm	
Dissipation Factor Frequency	IEC 60250	-	0,020		
Dielectric Constant	IEC 60250	-	3,6		
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	250		

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Tracking Resistance (CTI - Method B)	IEC 60112	Volt	175M	
PHYSICAL				
Density (+23°C)	ISO 1183	g/cm^3	1,58	
Filler content	ISO 3451	%	20	850°C - 1 h
Granule Humidity	Internal method	%	< 0,05	
Water Absorption (24h / +23°C)	ISO 62	%	0,05	
Water Absorption at Saturation	ISO 62	%	0,25	
Mould Shrinkage (Parallel)	Internal method	%	0,4 - 0,6	
Mould Shrinkage (Normal)	Internal method	%	0,6 - 0,9	
Melting temperature (DSC)	ISO 11357	°C	225	
MECHANICAL				
Tensile Modulus	ISO 527-1,2	MPa	8000	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	3	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	110	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	7500	Speed 1 mm/min
Flexural Break Strength	ISO 178	MPa	165	Speed 1 mm/min
IZOD Notched Impact (+23°C)	ASTM D256	J/m	65	
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	5,5	
THERMAL				
Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	215	50°C / h
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	210	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	205	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	215	
Continuous service temperature (20.000 h)	UL746 B	°C	90 (130H)	
Continuous service temperature (short term)	UL746 B	°C	130 (160H)	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	3x10E(-5)	-30°C /+30°C

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FLAMMABILITY

Flame Behaviour (0,97 mm)	UL94	Class	V0	UL approved
Flame Behaviour (1,6 mm)	UL94	Class	V0	
Flame Behaviour (3,2 mm)	UL94	Class	V0	
Glow Wire Flammability Index-GWFI (2 mm)	IEC 60695-2-12	°C	960	
Oxigen index	ASTM D2863	%	31	

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	< 10%
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

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Screw Compression Ratio	2:1 - 2,5:1
Vent Depth	0,02 mm

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