PRODUCT INFORMATION

TAROLOX 10 H G6 X0

PBT medium viscosity 30% glass fibres reinforced heat stabilized, flame retardant UL94 V0, good flow, good surface appearance, good mechanical properties, very high dimensional stability.

ISO short	ISO 1043: PBT-GF30 FR(17)
Form	Pellets
UL file	E143048

Key Features

- Improved thermal resistance
- Designed for injection moulding applications
- Glass fibres reinforced
- Flame retardant

Availability

- W: lubricated
- all colors

Compliance

- UL94 V0 approved all colours at 0,97 mm - NC,BK at 0,75 mm. UL 746 B approved - UL 746 A (HAI-HWI-CTI) approved. IMQ T190 approved.

Process

- INJECTION MOULDING

Application

- Household
- Electronic
- Electrical
- Connectors
- Consumer
- Building

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	>10E(15)		
Dielectric Strength	IEC 60243-1	kV/mm	26	2 mm	
Dissipation Factor Frequency	IEC 60250	-	0,020		
Dielectric Constant	IEC 60250	-	3,7		
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	250	UL746 A CTI class 2	
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,65		

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Filler content	ISO 3451	%	30	850°C - 1 h
Granule Humidity	Internal method	%	<0,05	
Water Absorption (24h / +23°C)	ISO 62	%	0,03	
Water Absorption at Saturation	ISO 62	%	0,22	
Mould Shrinkage (Parallel)	Internal method	%	0,2 - 0,4	
Mould Shrinkage (Normal)	Internal method	%	0,4 - 0,6	
Melting temperature (DSC)	ISO 11357	°C	225	

MECHANICAL

Tensile Modulus	ISO 527-1,2	MPa	10000	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	2	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	125	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	8500	Speed 2 mm/min
Flexural Break Strength	ISO 178	MPa	200	Speed 10 mm/min
IZOD Notched Impact (+23°C)	ASTM D256	J/m	80	
IZOD Notched Impact (0°C)	ASTM D256	J/m	30	
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	7	

THERMAL

Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	215	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	210	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	140	
Continuous service temperature (short term)	UL746 B	°C	165	
Continuous service temperature	UL746 B	°C	130	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	2,7x10E(-5)	-30°C /+30°C
Thermal Conductivity	ISO 8302	W /(m K)	0,32	

FLAMMABILITY

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Flame Behaviour (0,75 mm)	UL94	Class	V0	UL approved NC, BK
Flame Behaviour (0,97 mm)	UL94	Class	V0	UL approved all colours
Flame Behaviour (1,5 mm)	UL94	Class	V0	
Flame Behaviour (3,0 mm)	UL94	Class	V0	
Glow Wire Flammability Index-GWFI (2 mm)	IEC 60695-2-12	°C	960	
Glow Wire Ignition Temperature-GWIT (1 mm)	IEC 60695-2-13	°C	825	
Oxigen index	ASTM D2863	%	31	
HAI (0,75 mm)	UL746 A	PLC	0	UL approved
HAI (0,97 mm)	UL746 A	PLC	0	UL approved
HAI (1,5 mm)	UL746 A	PLC	0	UL approved
HAI (3,0 mm)	UL746 A	PLC	0	UL approved
HWI (0,75 mm)	UL746 A	PLC	3	UL approved
HWI (0,97 mm)	UL746 A	PLC	3	UL approved
HWI (1,5 mm)	UL746 A	PLC	3	UL approved
HWI (3,0 mm)	UL746 A	PLC	2	UL approved

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

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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	2:1 - 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.