



PRODUCT INFORMATION

TAROLOX 10 X0

PBT medium viscosity flame retardant UL94 V0, good flow, good mechanical and thermal properties.

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

Key Features

- Unfilled
- Designed for injection moulding applications
- Flame retardant

Availability

- W: lubricated
- H: heat stabilized
- All colours

Compliance

- UL94 V0 approved all colours at 0,97 mm. UL746 B approved.

Process

- INJECTION MOULDING

Application

- Household
- Electronic
- Electrical
- Connectors
- Automotive

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	>10exp(15)		
Dielectric Strength	IEC 60243-1	kV/mm	22	2 mm	
Dissipation Factor Frequency	IEC 60250	-	0,020		
Dielectric Constant	IEC 60250	-	3,10		
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	275		
Tracking Resistance (CTI - Method B)	IEC 60112	Volt	175M		
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm ³	1,41-1,43		
Granule Humidity	Internal method	%	<0,05		
Water Absorption (24h / +23°C)	ISO 62	%	0,06		

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Water Absorption at Saturation	ISO 62	%	0,35	
Mould Shrinkage (Parallel)	Internal method	%	1,5-2,0	23°C - 3,2 mm
Mould Shrinkage (Normal)	Internal method	%	1,5-2,0	23°C - 3,2 mm
Melting temperature (DSC)	ISO 11357	°C	220-225	

MECHANICAL

Tensile Modulus	ISO 527-1,2	MPa	2900	Speed 1 mm/min
Tensile Yield Strength	ISO 527-1,2	MPa	60	Speed 50 mm/min
Elongation at Break	ISO 527-1,2	%	>50	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	55	Speed 1 mm/min
Flexural Modulus	ISO 178	MPa	2700	Speed 1 mm/min
Flexural Max Strength	ISO 178	MPa	100	Speed 1 mm/min
IZOD Notched Impact	ASTM D256	J/m	40	+23°C
IZOD Notched Impact	ASTM D256	J/m	30	-20°C
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m ²	3,5	
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m ²	45	
CHARPY Unnotched Impact (-25°C)	ISO 179/1eU	kJ/m ²	40	

THERMAL

Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	205	50°C / h
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	190	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	75	120°C / h
Ball Pressure Test	IEC 60695-10-2	°C	165	
Continuous service temperature (20.000 h)	UL746 B	°C	90 (120 H)	IEC 60216
Continuous service temperature (short term)	UL746 B	°C	130 (160 H)	IEC 60216
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K ⁻¹	9x10exp(-5)	-30°C /+30°C

FLAMMABILITY

Flame Behaviour (0,75 mm)	UL94	Class	V0	
Flame Behaviour (0,97 mm)	UL94	Class	V0	UL approved

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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
Oxygen index	ASTM D2863	%	28

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 Re grind	< 15%
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	2:1 - 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.