



PRODUCT INFORMATION

**TAROLOX 111 G3**

PET medium viscosity 15% glass fibres reinforced, very good chemical resistance, good mechanical, thermal and electrical properties, low moisture absorption, good dimensional stability.

**ISO short Form** ISO 1043: PET-GF15 Pellets

**Key Features**

- Good impact - stiffness balance
- High stiffness
- Designed for injection moulding applications
- Glass fibres reinforced
- Excellent filling qualities
- Excellent surface smoothness
- Good surface aspect

**Availability**

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

**Process**

- INJECTION MOULDING

**Application**

- Electrical
- Automotive

Property	Method	Unit	Value	Condition	State
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**ELECTRICAL**

Dielectric Strength	IEC 60243-1	kV/mm	32	1 mm	
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	250		

**PHYSICAL**

Density (+23°C)	ISO 1183	g/cm <sup>3</sup>	1,40-1,42		
Filler content	ISO 3451	%	15	750°C - 1 h	
Granule Humidity	Internal method	%	<0,05		
Water Absorption (24h / +23°C)	ISO 62	%	0,08		
Mould Shrinkage (Parallel)	Internal method	%	0,3 - 0,5		
Mould Shrinkage (Normal)	Internal method	%	0,7 - 0,9		
Melting temperature (DSC)	ISO 11357	°C	252		



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**MECHANICAL**

Tensile Modulus	ISO 527-1,2	MPa	5300	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	3,5	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	80	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	4800	Speed 1 mm/min
Flexural Break Strength	ISO 178	MPa	110	Speed 1 mm/min
IZOD Notched Impact	ASTM D256	J/m	50	+23°C
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m <sup>2</sup>	6	
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m <sup>2</sup>	30	

**THERMAL**

Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	220	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	218	120°C / h
Ball Pressure Test	IEC 60695-10-2	°C	245	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K <sup>-1</sup>	3,6x10 <sup>exp(-5)</sup>	-30°C /+30°C

**FLAMMABILITY**

Flame Behaviour (0,97 mm)	UL94	Class	HB
Glow Wire Flammability Index-GWFI (2 mm)	IEC 60695-2-12	°C	750
Oxygen index	ASTM D2863	%	22

**INJECTION MOULDING**

	Value
Drying Temperature (Desiccant Dryer)	80 - 120°C
Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	< 0,03
Suggested Max Re grind	< 10%
Melt Temperature	260 - 285°C
Feed Temperature	250°C
Rear Temperature	265°C
Middle Temperature	270°C
Front Temperature	275°C



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Nozzle Temperature	275°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
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.