



PRODUCT INFORMATION

**TAROLON 2500 G4 X1**

Polycarbonate medium viscosity 20% glass fibres reinforced, flame retardant UL94 V1, good mechanical properties also at high temperature, good dimensional stability.

**ISO short** ISO 1043: PC-GF20 FR  
**Form** Pellets  
**UL file** E143048

**Key Features**

- Good impact - stiffness balance
- Designed for injection moulding applications
- Halogen free
- Glass fibres reinforced

**Compliance**

- UL94 V1 approved all colours at 1,6 mm and V0 at 3,5 mm.
- Halogens free according to DIN VDE 0472 part 815
- Halogens free according to IEC 61249-2-21

**Availability**

- W: lubricated
- Opaque colours
- LP: laser printable
- L: UV stabilized

**Process**

- INJECTION MOULDING

**Application**

- Electronic
- Electrical
- Automotive

Property	Method	Unit	Value	Condition	State
<b>ELECTRICAL</b>					
Volume Resistivity	IEC 60093	Ohm cm	>10exp(16)		
Dielectric Strength	IEC 60243-1	kV/mm	22	2 mm	
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	175		
<b>PHYSICAL</b>					
Density (+23°C)	ISO 1183	g/cm <sup>3</sup>	1,33-1,35		
Filler content	ISO 3451	%	20	850°C - 1 h	
Water Absorption (24h / +23°C)	ISO 62	%	0,08		
Water Absorption at Saturation	ISO 62	%	0,25		
Mould Shrinkage (Parallel)	Internal method	%	0,3 - 0,5		

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Melt Flow Rate (MFR)	ISO 1133	g/10 min	12	300°C - 1,2 kg
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**MECHANICAL**

Tensile Modulus	ISO 527-1,2	MPa	6000	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	4	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	90	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	5500	Speed 1 mm/min
Flexural Break Strength	ISO 178	MPa	150	Speed 1 mm/min
IZOD Notched Impact	ASTM D256	J/m	125	+23°C
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m <sup>2</sup>	10	
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m <sup>2</sup>	45	

**THERMAL**

Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	153	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	142	120°C / h
Ball Pressure Test	IEC 60695-10-2	°C	135	
Continuous service temperature (20.000 h)	UL746 B	°C	135	
Continuous service temperature	UL746 B	°C	80	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K <sup>-1</sup>	3x10exp(-5)	-30°C /+30°C

**FLAMMABILITY**

Flame Behaviour (1,6 mm)	UL94	Class	V1	UL approved
Glow Wire Flammability Index-GWFI (1,6 mm)	IEC 60695-2-12	°C	960	
Oxygen index	ASTM D2863	%	31	

**INJECTION MOULDING**

	Value
Drying Temperature (Desiccant Dryer)	120°C
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Moisture	0,02 %
Suggested Max Re grind	< 15 %
Melt Temperature	260 - 290°C
Feed Temperature	80 - 100°C



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Rear Temperature	250 - 270°C
Middle Temperature	260 - 280°C
Front Temperature	270 - 285°C
Nozzle Temperature	275 - 295°C
Mould Temperature	80 - 120°C
Injection Rate	Medium to Fast
Back Pressure	As low as possible (< 0,3 Mpa)
Screw Revolving Speed	25 - 50 rpm
Screw Revolving Speed	50 rpm @ Diameter 40 mm
Screw Revolving Speed	35 rpm @ Diameter 55 mm
Screw Revolving Speed	25 rpm @ Diameter 75 mm
Cushion	3 - 5 mm
Vent Depth	0,05 mm

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