PRODUCT INFORMATION

TAROMID B 280 G10

Polyamide 6 medium viscosity 50% glass fibres reinforced, high mechanical properties, very high dimensional stability and low shrinkage.

ISO short	ISO 1043: PA6-GF50
Form	Pellets

Key Features

- Good impact - stiffness balance
- High stiffness
- Designed for injection moulding applications
- Glass fibres reinforced
- Good flowability

Availability

- W: lubricated
- LP: laser printable
- L: UV stabilized
- I: improved resistance to glycol-hydrolysis
- HT: high resistance to heat
- H: heat stabilized
- FA: food approval
- DB: dry blend coloured
- All colours

Process

- INJECTION MOULDING

Application

- Gears
- Household
- General purpose applications
- Furniture
- Electronic
- Pump housings
- Power tools case
- Electrical
- Wheels
- Toys
- Sports
- Consumer
- Building
- Automotive

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Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	10E(12)		Cond.
Volume Resistivity	IEC 60093	Ohm cm	10E(15)		Dry
Dielectric Strength	IEC 60243-1	kV/mm	24	2 mm	
Dissipation Factor Frequency	IEC 60250	-	0,15	1 MHz	Cond.
Dissipation Factor Frequency	IEC 60250	-	0,015	1 MHz	Dry
Surface Resistivity	IEC 60093	Ohm	10E(10)		Cond.
Dielectric Constant	IEC 60250	-	6,1	1 MHz	Cond.
Dielectric Constant	IEC 60250	-	4,20	1 MHz	Dry
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	550		
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,56		
Filler content	ISO 3451	%	50	750°C - 1 h	
Filler type	ISO 1043	-	GF		
Granule Humidity	Internal method	%	< 0,15		
Water Absorption (24h / +23°C)	ISO 62	%	0,8		
Water Absorption at Saturation	ISO 62	%	4,5		
Mould Shrinkage (Parallel)	Internal method	%	0,1 - 0,2		
Mould Shrinkage (Normal)	Internal method	%	0,3 - 0,4		
Melting temperature (DSC)	ISO 11357	°C	222		
Melt Flow Rate (MFR)	ISO 1133	g/10 min	5	250°C - 2,16 kg	
MECHANICAL					
Tensile Modulus	ISO 527-1,2	MPa	10600	Speed 1 mm/min	Cond.
Tensile Modulus	ISO 527-1,2	MPa	16000	Speed 1 mm/min	Dry
Elongation at Break	ISO 527-1,2	%	4,2	Speed 50 mm/min	Cond.
Elongation at Break	ISO 527-1,2	%	2,3	Speed 50 mm/min	Dry

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Tensile Break Strength	ISO 527-1,2	MPa	140	Speed 50 mm/min	Cond.
Tensile Break Strength	ISO 527-1,2	MPa	220	Speed 50 mm/min	Dry
Flexural Modulus	ISO 178	MPa	9700	Speed 2 mm/min	Cond.
Flexural Modulus	ISO 178	MPa	14500	Speed 2 mm/min	Dry
Flexural Break Strength	ISO 178	MPa	210	Speed 10 mm/min	Cond.
Flexural Break Strength	ISO 178	MPa	330	Speed 10 mm/min	Dry
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	22		Cond.
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	18		Dry
IZOD Notched Impact (+23°C)	ASTM D256	J/m	220		Cond.
IZOD Notched Impact (+23°C)	ASTM D256	J/m	175		Dry
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	25		Cond.
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	16		Dry
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	95		Cond.
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	86		Dry
CHARPY Notched Impact (-30°C)	ISO 179/1eA	kJ/m^2	13		Dry
CHARPY Unnotched Impact (-30°C)	ISO 179/1eU	kJ/m^2	85		Dry

THERMAL

Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	218	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	> 200	
Continuous service temperature (20.000 h)	UL746 B	°C	100 (H 130)	
Continuous service temperature (short term)	UL746 B	°C	140 (H 180)	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	2,4x10E(-5)	-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	
Burning Rate (US-FMVSS 302)	ISO 3795	mm/min	< 80	Thickness > 1,5 mm

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Oxigen index	ASTM D2863	%	25

INJECTION MOULDING	Value
Drying Temperature (Circulating Air Oven)	80 - 90°C
Drying Temperature (Desiccant Dryer)	80 - 90°C
Drying Time (Circulating Air Oven)	3 - 6 h
Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	< 0,08%
Suggested Max Regrind	< 15%
Melt Temperature	240 - 270°C
Feed Temperature	230°C
Rear Temperature	240°C
Middle Temperature	255°C
Front Temperature	260°C
Nozzle Temperature	255°C
Mould Temperature	70 - 90°C
Injection Rate	Medium
Injection Pressure	40 - 100 Mpa
Packing Pressure	30 - 80 Mpa
Back Pressure	5 - 10 Mpa
Screw Revolving Speed	50 - 100 rpm
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. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine or extruder size, part geometry and design.