



PRODUCT INFORMATION

## TAROFORCE PP 50-12

Polypropylene 50% long glass fibres reinforced chemically coupled to the resin matrix, resulting in high strength and stiffness combined with high heat deflection resistance. The impact properties and the creep resistance are highly increased due to the fibre skeleton structure formed in the parts.

**ISO short Form** ISO 1043: PP-GF50 Pellets (12 mm length)

### Key Features

- Very isotropic shrinkage minimizing the warpage
- High impact strength and creep resistance
- High strength and stiffness combined with high heat deflection resistance

### Availability

- L = UV stabilized grade
- HT = high heat ageing stability grade
- H = heat ageing stability grade
- E = Low emission grade
- C = Concentrate grade
- Natural and Black colours

### Process

- INJECTION MOULDING

### Application

- Functional / structural parts with critical technical requirements
- Furniture
- Seat modules
- Central console carriers
- Hatchback door modules
- Lift-gate modules
- Gear shift boxes
- Battery holders
- Instrument panel carriers
- Door module carriers
- Front end carriers
- Automotive

Property	Method	Unit	Value	Condition	State
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### PHYSICAL

Density (+23°C)	ISO 1183	g/cm <sup>3</sup>	1,33		
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Pellet length	Internal method	mm	12
Long Glass Fiber content	ISO 3451	%	50
Water Absorption (24h / +23°C)	ISO 62	%	0,2
Mould Shrinkage (Parallel)	Internal method	%	0,09
Mould Shrinkage (Normal)	Internal method	%	0,61
Poisson's ratio	Internal method	-	0,35

**MECHANICAL**

Tensile Modulus	ISO 527-1,2	MPa	12500	Speed 1 mm/min
Elongation at Break	ISO 527-1,2	%	1,8	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	130	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	12000	Speed 1 mm/min
Flexural Break Strength	ISO 178	MPa	195	Speed 1 mm/min
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m <sup>2</sup>	25	
IZOD Notched Impact (+23°C)	ASTM D256	J/m	300	
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m <sup>2</sup>	25	
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m <sup>2</sup>	60	
CHARPY Notched Impact (-30°C)	ISO 179/1eA	kJ/m <sup>2</sup>	22	
CHARPY Unnotched Impact (-30°C)	ISO 179/1eU	kJ/m <sup>2</sup>	50	

**THERMAL**

Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	140	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	152	
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	162	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K <sup>-1</sup>	3,1x10E(-5)	+10°C / +40°C
Coefficient of linear thermal expansion (transversal)	ISO 11359-1,-2	K <sup>-1</sup>	5,3x10E(-5)	+10°C / +40°C

**FLAMMABILITY**

Flame Behaviour (1,6 mm)	UL94	Class	HB	
Burning Rate (US-FMVSS 302)	ISO 3795	mm/min	< 80	Thickness > 1,5 mm

