PRODUCT INFORMATION

TAROMID A 280 G10

Polyamide 66 medium viscosity 50% glass fibres reinforced, good mechanical and thermal properties, very high stiffness and dimensional stability, very low shrinkage.

ISO short	ISO 1043: PA66-GF50
Form	Pellets
UL file	E143048

Key Features

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

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
- DP: de-pulverized
- All colours

Compliance

- UL94 HB approved at 0,75 mm - NC (HW version only)

Process

- INJECTION MOULDING

Application

- Household
- Furniture
- Electronic
- Electrical
- Toys
- Sports
- Consumer
- Building
- Automotive

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	10E10		Cond.
Volume Resistivity	IEC 60093	Ohm cm	10E13		Dry

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Dielectric Strength	IEC 60243-1	kV/mm	28	2 mm	
Surface Resistivity	IEC 60093	Ohm	10E10		Cond.
Dielectric Constant (1 MHz)	IEC 60250	-	6		Cond.
Dielectric Constant (1 MHz)	IEC 60250	-	4,40		Dry
Dissipation Factor Frequency (1 MHz)	IEC 60250	-	3		Cond.
Dissipation Factor Frequency (1 MHz)	IEC 60250	-	1,6x10E(-1)		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	%	< 0,10		
Water Absorption (24h / +23°C)	ISO 62	%	0,5 - 0,6		
Water Absorption at Saturation	ISO 62	%	3		
Mould Shrinkage (Parallel)	Internal method	%	0,15 - 0,25	+23°C - 3,2 mm	
Mould Shrinkage (Normal)	Internal method	%	0,3 - 0,5	+23°C - 3,2 mm	
Melting temperature (DSC)	ISO 11357	°C	256		
Melt Flow Rate (MFR)	ISO 1133	g/10 min	2	280°C - 1 kg	
Melt Flow Rate (MFR)	ISO 1133	g/10 min	5	280°C - 2,16 kg	
MECHANICAL					
Tensile Modulus	ISO 527-1,2	MPa	12000	+23°C - Speed 1 mm/min	Cond.
Tensile Modulus	ISO 527-1,2	MPa	16000	+23°C - Speed 1 mm/min	Dry
Elongation at Break	ISO 527-1,2	%	3,4	+23°C - Speed 50 mm/min	Cond.
Elongation at Break	ISO 527-1,2	%	2,5	+23°C - Speed 50 mm/min	Dry
Tensile Break Strength	ISO 527-1,2	MPa	170	+23°C - Speed 50 mm/min	Cond.
Tensile Break Strength	ISO 527-1,2	MPa	230	+23°C - Speed 50 mm/min	Dry
Flexural Modulus	ISO 178	MPa	13500	+23°C - Speed 2 mm/min	Cond.

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Flexural Modulus	ISO 178	MPa	15000	+23°C - Speed 2 mm/min	Dry
Flexural Break Strength	ISO 178	MPa	280	+23°C - Speed 10 mm/min	Cond.
Flexural Break Strength	ISO 178	MPa	340	+23°C - Speed 10 mm/min	Dry
IZOD Notched Impact (+23°C)	ASTM D256	J/m	160		Cond.
IZOD Notched Impact (+23°C)	ASTM D256	J/m	150		Dry
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	23		Cond.
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	17		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	90		Dry
CHARPY Unnotched Impact (-30°C)	ISO 179/1eU	kJ/m^2	80		Dry

THERMAL

Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	255	50°C / h
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	250	120°C / h
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	250	120°C / h
Ball Pressure Test	IEC 60695-10-2	°C	230	
Continuous service temperature (20.000 h)	UL746 B	°C	110 (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	1,5x10E(-5)	-30°C /+30°C

FLAMMABILITY

Flame Behaviour (0,75 mm)	UL94	Class	HB	UL approved (HW version only)
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
Oxigen index	ASTM D2863	%	27	

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 hours

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Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Moisture	<0,08 %
Suggested Max Regrind	<15 %
Melt Temperature	280 - 310°C
Feed Temperature	100°C
Rear Temperature	275°C
Middle Temperature	290°C
Front Temperature	295°C
Nozzle Temperature	285°C
Mould Temperature	80 - 120°C
Injection Rate	Medium to Fast (50 - 150 mm/sec)
Injection Pressure	80 - 130 Mpa
Packing Pressure	30 - 80 Mpa
Back Pressure	0,3 - 0,7 Mpa
Screw Revolving Speed	50 - 100 rpm
Cushion	2 - 6 mm
Screw L/D Ratio	18 - 22
Screw Compression Ratio	2:1 - 3:1
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 size, part geometry and design.