PRODUCT INFORMATION

TAROMID A 280 G4

Polyamide 66 medium viscosity, 20% glass fibres reinforced, good mechanical and thermal properties.

ISO short	ISO 1043: PA66-GF20
Form	Pellets
UL file	E143048

Key Features

- Good impact - stiffness balance
- 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
- 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
Dielectric Strength	IEC 60243-1	kV/mm	22	2 mm	

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Dissipation Factor Frequency	IEC 60250	-	2,5x10E(-2)	1 MHz	Cond.
Dissipation Factor Frequency	IEC 60250	-	1,5x10E(-4)	1 MHz	Dry
Dielectric Constant	IEC 60250	-	5,5	1 MHz	Cond.
Dielectric Constant	IEC 60250	-	5,5	1 MHz	Dry
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	500		
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,28		
Filler content	ISO 3451	%	20		
Filler type	ISO 1043	-	GF		
Granule Humidity	Internal method	%	0,10		
Water Absorption (24h / +23°C)	ISO 62	%	0,8		
Water Absorption at Saturation	ISO 62	%	5,8		
Mould Shrinkage (Parallel)	Internal method	%	0,45 - 0,7		
Mould Shrinkage (Normal)	Internal method	%	1,1 - 1,6		
Melting temperature (DSC)	ISO 11357	°C	256		
Melt Flow Rate (MFR)	ISO 1133	g/10 min	4	280°C - 1 kg	
Melt Flow Rate (MFR)	ISO 1133	g/10 min	14	280°C - 2,16 kg	
MECHANICAL					
Tensile Modulus	ISO 527-1,2	MPa	5500	Speed 1 mm/min	Cond.
Tensile Modulus	ISO 527-1,2	MPa	7300	Speed 1 mm/min	Dry
Elongation at Break	ISO 527-1,2	%	7	Speed 50 mm/min	Cond.
Elongation at Break	ISO 527-1,2	%	3	Speed 50 mm/min	Dry
Tensile Break Strength	ISO 527-1,2	MPa	100	Speed 50 mm/min	Cond.
Tensile Break Strength	ISO 527-1,2	MPa	130	Speed 50 mm/min	Dry
Flexural Modulus	ISO 178	MPa	5000	Speed 1 mm/min	Cond.
Flexural Modulus	ISO 178	MPa	6600	Speed 1 mm/min	Dry
Flexural Break Strength	ISO 178	MPa	150	Speed 1 mm/min	Cond.

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Flexural Break Strength	ISO 178	MPa	210	Speed 1 mm/min	Dry
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	12,5		Cond.
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	8		Dry
IZOD Notched Impact (+23°C)	ASTM D256	J/m	110		Cond.
IZOD Notched Impact (+23°C)	ASTM D256	J/m	75		Dry
IZOD Unnotched Impact (0°C)	ASTM D256	J/m	35		Dry
IZOD Notched Impact (-25°C)	ASTM D256	J/m	10		Dry
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	12,5		Cond.
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	9		Dry
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	75		Cond.
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	50		Dry
CHARPY Notched Impact (-30°C)	ISO 179/1eA	kJ/m^2	6		Dry
CHARPY Unnotched Impact (-30°C)	ISO 179/1eU	kJ/m^2	45		Dry
THERMAL					
Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	250	50°C / h	
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	245	50°C / h	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	235	120°C / h	
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	245		
Ball Pressure Test	IEC 60695-10-2	°C	230		
Continuous service temperature (20.000 h)	UL746 B	°C	90 (130H/140HT)		
Continuous service temperature (short term)	UL746 B	°C	140 (160H/180HT)		
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	5x10E(-5)	-30°C /+30°C	
Coefficient of linear thermal expansion (transversal)	ISO 11359-1,-2	K^-1	8x10E(-5)	-30°C /+30°C	
Thermal Conductivity	ISO 8302	W /(m K)	0,34		
FLAMMABILITY					
Flame Behaviour (0,75 mm)	UL94	Class	HB	UL approved (HW version only)	

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Flame Behaviour (0,75 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
Oxigen index	ASTM D2863	%	26	

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
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Moisture	<0,08 %
Suggested Max Regrind	<15 %
Melt Temperature	270 - 300°C
Feed Temperature	100°C
Rear Temperature	275°C
Middle Temperature	285°C
Front Temperature	285°C
Nozzle Temperature	280°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.