PRODUCT INFORMATION

TAROMID A 280 H G6 DX0 TR1

Polyamide 66 medium viscosity 30% glass fibres reinforced, flame retardant UL94 V0 and 5VA rated, heat stabilized, very good flame proofing also at low thickness. High mechanical and thermal properties, low shrinkage and high dimensional stability, high tracking resistance.

ISO short	ISO 1043: PA66-GF30 FR(17)
Form	Pellets
UL file	E143048

Key Features

- High mechanical properties
- Designed for injection moulding applications
- Improved heat resistance
- Flame retardant

Availability

- W: lubricated
- Various colours

Compliance

- UL94 V-0
- UL94 5V-A
- UL746 B
- UL746 A - HWI class 0 approved
- UL746 A - HAI class 0 approved
- UL746 A - CTI class 1 approved
- AFNOR NF F 16-101 and NF F 16-102 class I2-F3 (only BLACK version)

Process

- INJECTION MOULDING

Application

- Electronic
- Power tools case
- Electrical
- Connectors

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	10E(15)		
Dielectric Strength	IEC 60243-1	kV/mm	26	2 mm	
Dissipation Factor Frequency	IEC 60250	-	0,020		

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Dielectric Constant	IEC 60250	-	3,70		
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	> 400	UL746 A CTI class 1	
Tracking Resistance (CTI - Method B)	IEC 60112	Volt	> 250		
Tracking Resistance CTI	UL746 A (ASTM D3638)	PLC	Class 1		
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,57		
Filler content	ISO 3451	%	30	850°C - 1 h	
Granule Humidity	Internal method	%	< 0,15		
Water Absorption (24h / +23°C)	ISO 62	%	0,5		
Water Absorption at Saturation	ISO 62	%	4,5		
Mould Shrinkage (Parallel)	Internal method	%	0,30 - 0,50		
Mould Shrinkage (Normal)	Internal method	%	0,45 - 0,75		
Melting temperature (DSC)	ISO 11357	°C	256		
UL 746C Outdoor Suitability (f2)	UL746 C	Class	PASS		
MECHANICAL					
Tensile Modulus	ISO 527-1,2	MPa	9400	Speed 1 mm/min	Dry
Elongation at Break	ISO 527-1,2	%	2,2	Speed 50 mm/min	Dry
Tensile Break Strength	ISO 527-1,2	MPa	145	Speed 50 mm/min	Dry
Flexural Modulus	ISO 178	MPa	9200	Speed 1 mm/min	Dry
Flexural Break Strength	ISO 178	MPa	206	Speed 1 mm/min	Dry
IZOD Notched Impact	ASTM D256	J/m	80	+23°C	Dry
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	8		Dry
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	32		Dry
THERMAL					
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	242	50°C / h	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	240	120°C / h	

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Ball Pressure Test	IEC 60695-10-2	°C	230	
Continuous service temperature (short term)	UL746 B	°C	180	
Continuous service temperature	UL746 B	°C	100	M. w/o imp. 0,75 mm
Continuous service temperature	UL746 B	°C	130	M. w/o imp. 3 mm
Continuous service temperature	UL746 B	°C	100	M. with imp. 0,75 mm
Continuous service temperature	UL746 B	°C	130	M. with imp. 3 mm
Continuous service temperature	UL746 B	°C	130	E.0,75 mm
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	2,5x10E(-5)	-30°C /+30°C

FLAMMABILITY

Flame Behaviour (0,75 mm)	UL94	Class	V0	UL approved
Flame Behaviour (1,5 mm)	UL94	Class	5VA	UL approved
Flame Behaviour (3,0 mm)	UL94	Class	5VA	UL approved
Glow Wire Flammability Index-GWFI	IEC 60695-2-12	°C	960	Thickness 1,5 mm/UL approved
Glow Wire Flammability Index-GWFI	IEC 60695-2-12	°C	960	Thickness 3,0 mm/UL approved
Glow Wire Flammability Index-GWFI	IEC 60695-2-12	°C	960	Thickness 0,75 mm/UL approved
Glow Wire Ignition Temperature-GWIT	IEC 60695-2-13	°C	930	Thickness 0,75 mm/UL approved
Glow Wire Ignition Temperature-GWIT	IEC 60695-2-13	°C	930	Thickness 1,5 mm/UL approved
Glow Wire Ignition Temperature-GWIT	IEC 60695-2-13	°C	930	Thickness 3,0 mm/UL approved
Oxigen index	ASTM D2863	%	35	NF T 51-071
European Railways Certifications R22	EN 45545-2	Class	HL1	Thickness 2 mm
European Railways Certifications R23	EN 45545-2	Class	HL1 - HL2	Thickness 2 mm
Reaction to fire	NF F 16-101 NF F 16-102	Class	I2 (only BLACK version)	Thickness 2 mm
Smoke index	NF F 16-101 NF F 16-102	Class	F3 (only BLACK version)	Thickness 2 mm
HAI (0,75 mm)	UL746 A	PLC	class 0	UL approved
HAI (1,5 mm)	UL746 A	PLC	class 0	UL approved
HAI (3,0 mm)	UL746 A	PLC	class 0	UL approved

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HWI (0,75 mm)	UL746 A	PLC	class 0	UL approved
HWI (1,5 mm)	UL746 A	PLC	class 0	UL approved
HWI (3,0 mm)	UL746 A	PLC	class 0	UL approved

INJECTION MOULDING	**Value**
Drying Temperature (Desiccant Dryer)	80 - 90°C
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Moisture	< 0,08 %
Suggested Max Regrind	< 15 %
Melt Temperature	270 - 290°C
Feed Temperature	220°C
Rear Temperature	260°C
Middle Temperature	275°C
Front Temperature	280°C
Nozzle Temperature	275°C
Mould Temperature	80 - 100°C
Injection Rate	Medium
Packing Pressure	30 - 80 Mpa
Back Pressure	As low as possible (0,3 - 0,6 Mpa)
Screw Revolving Speed	50 - 100 rpm
Cushion	3 - 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.