PRODUCT INFORMATION

TAROMID A 280 G5 Y0

Polyamide 66 medium viscosity 25% glass fibres reinforced, heat stabilized, halogen free flame retardant UL94 V0, good flow, high electrical and mechanical properties, good dimensional stability.

ISO short	ISO 1043: PA66-GF25 FR(40)
Form	Pellets
UL file	E143048

Key Features

- High mechanical properties
- Light natural colour
- Designed for injection moulding applications
- Halogen free
- Flame retardant
- Antimony trioxide free

Availability

- LP: laser printable
- L: UV stabilized
- All colours

Compliance

- UL94 V0 approved all colours at 0,85-1,5 and 3,0 mm. UL746 B approved. UL746 A (CTI-GWIT-GWFI) approved.

Process

- INJECTION MOULDING

Application

- Electronic
- Electrical

Property	Method	Unit	Value	Condition	State
ELECTRICAL					
Volume Resistivity	IEC 60093	Ohm cm	6x10E(14)		Dry
Surface Resistivity	IEC 60093	Ohm	2x10E(15)		Dry
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	600		Cond.
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	600	UL746 A CTI class 0	Dry
PHYSICAL					
Density (+23°C)	ISO 1183	g/cm^3	1,36		
Granule Humidity	Internal method	%	< 0,15		
Water Absorption (24h / +23°C)	ISO 62	%	0,7		
Water Absorption at Saturation	ISO 62	%	4,8		
Mould Shrinkage (Parallel)	Internal method	%	0,4 - 0,6		Dry

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Mould Shrinkage (Normal)	Internal method	%	0,5 - 0,9		Dry
Melting temperature (DSC)	ISO 11357	°C	256		

MECHANICAL

Tensile Modulus	ISO 527-1,2	MPa	6200	Speed 1 mm/min	Cond.
Tensile Modulus	ISO 527-1,2	MPa	9400	Speed 1 mm/min	Dry
Elongation at Break	ISO 527-1,2	%	3,1	Speed 50 mm/min	Cond.
Elongation at Break	ISO 527-1,2	%	2,3	Speed 50 mm/min	Dry
Tensile Break Strength	ISO 527-1,2	MPa	88	Speed 50 mm/min	Cond.
Tensile Break Strength	ISO 527-1,2	MPa	125	Speed 50 mm/min	Dry
Flexural Modulus	ISO 178	MPa	6000	Speed 2 mm/min	Cond.
Flexural Modulus	ISO 178	MPa	8500	Speed 2 mm/min	Dry
Flexural Break Strength	ISO 178	MPa	120	Speed 10 mm/min	Cond.
Flexural Break Strength	ISO 178	MPa	175	Speed 10 mm/min	Dry
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	8,8		Cond.
IZOD Notched Impact (+23°C)	ISO 180/1A	kJ/m^2	6,9		Dry
IZOD Notched Impact (+23°C)	ASTM D256	J/m	92		Cond.
IZOD Notched Impact (+23°C)	ASTM D256	J/m	70		Dry
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	8,4		Cond.
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m^2	6,8		Dry
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	74		Cond.
CHARPY Unnotched Impact (+23°C)	ISO 179/1eU	kJ/m^2	50		Dry

THERMAL

Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	246	50°C / h	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	242	120°C / h	
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	256		
Ball Pressure Test	IEC 60695-10-2	°C	210		
Continuous service temperature (20.000 h)	UL746 B	°C	115		

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Continuous service temperature (short term)	UL746 B	°C	150	
Coefficient of linear thermal expansion (parallel)	ISO 11359-1,-2	K^-1	3x10E(-5)	-30°C /+30°C

FLAMMABILITY

Flame Behaviour (0,85 mm)	UL94	Class	V0	UL approved
Flame Behaviour (1,5 mm)	UL94	Class	V0	UL approved
Flame Behaviour (3,0 mm)	UL94	Class	V0	UL approved
Glow Wire Flammability Index-GWFI (1 mm)	IEC 60695-2-12	°C	960	
Glow Wire Flammability Index-GWFI	IEC 60695-2-12	°C	960	UL approved at 3,0 mm
Glow Wire Ignition Temperature-GWIT	IEC 60695-2-13	°C	775	UL approved at 3,0 mm
Oxigen Index Test (L.O.I.)	ISO 4589-2	%	35,4	
European Railways Certifications R22	EN 45545-2	Class	HL1 - HL2 - HL3	Thickness 2 mm
European Railways Certifications R23	EN 45545-2	Class	HL1 - HL2 - HL3	Thickness 2 mm
HAI (0,85 mm)	UL746 A	PLC	0	UL approved
HAI (1,5 mm)	UL746 A	PLC	0	UL approved
HAI (3,0 mm)	UL746 A	PLC	0	UL approved
HWI (0,85 mm)	UL746 A	PLC	0	UL approved
HWI (1,5 mm)	UL746 A	PLC	0	UL approved
HWI (3,0 mm)	UL746 A	PLC	0	UL approved

INJECTION MOULDING	Value
Drying Temperature (Desiccant Dryer)	80 - 90°C
Drying Time (Desiccant Dryer)	2 - 4 h
Suggested Max Moisture	0,02 %
Suggested Max Regrind	< 10 %
Melt Temperature	260 - 290°C
Feed Temperature	230°C
Rear Temperature	260°C
Middle Temperature	270°C
Front Temperature	280°C
Nozzle Temperature	270°C

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Mould Temperature	70 - 90°C
Injection Rate	Medium to Fast
Injection Pressure	40 - 100 Mpa
Packing Pressure	25 - 75 Mpa
Back Pressure	As low as possible (0,3 - 0,6 MPa)
Screw Revolving Speed	25 - 50 rpm
Screw Revolving Speed	50 rpm @ Diameter 40 mm
Screw Revolving Speed	35 rpm @ Diameter 55 mm
Screw Revolving Speed	25 rpm @ Diameter 75 mm
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.