+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

TECHNYL® PROTECT
Flame retardants

DOMO
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TECHNICAL DATA SHEET

TECHNYL PROTECT A 50X1 GY 2610 LP

TECHNYL A 50X1 GY 2610 LP is an unreinforced blend of polyamide 66 and 6 based on a non-phosphorous and non-halogenated flame retardant system, heat stabilized, for injection moulding. This flame retardant grade, UL94 V0 at 0.4mm, offers excellent filling qualities together with good stiffness.

General

Polymer type	PA66 (Polyamide 66)

Product identification

ISO 1043 abbreviation	PA66+PA6 FR(30)
ISO 16396 designation	PA66,0FR(30)0,M1,S14-040

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.16
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.7
Water absorption	24 hr, 23°C	ISO 62	%	1 - 1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.95 - 1.05
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.8
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3700 / 1300
Stress at break		ISO 527-1/-2	MPa	70 / 50
Strain at break		ISO 527-1/-2	%	15 / 150
Yield stress		ISO 527-1/-2	MPa	75 / 50
Yield strain		ISO 527-1/-2	%	10 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3200 / 1100
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	105 / 50
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	85 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4.5 / 16
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	257
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	200
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	60

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Electrical properties

	Condition	Standard	Unit	Value
Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+015
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	34

Burning behaviour

UL Yellow Card availability	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 3.0 mm	3.0 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	960
Glow-wire ignition temperature, GWIT, 0.40 mm	0.40 mm	IEC 60695-2-13	°C	960
Glow-wire ignition temperature, GWIT, 0.75 mm	0.75 mm	IEC 60695-2-13	°C	930
Glow-wire ignition temperature, GWIT, 1.5 mm	1.5 mm	IEC 60695-2-13	°C	755
Glow-wire ignition temperature, GWIT, 3.0 mm	3.0 mm	IEC 60695-2-13	°C	750
Oxygen index			%	33
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

Test run at 23°C if not differently specified, DAM state (dry as moulded).
**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Suggested max moisture	0.12 %
Rear temperature	260 - 270 °C
Middle temperature	265 - 275 °C
Front temperature	265 - 275 °C
Recommended mould temperature	60 - 80 °C

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

Disclaimer

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