TECHNYL® PROTECT
Flame retardants

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TECHNICAL DATA SHEET

TECHNYL PROTECT A 50X2 BK XB

(Previously DOMAMID FR 66/6V0M BKXB)

Polyamide 66/6, heat-aging stabilized, halogen and red phosphorus free flame retardant, for injection moulding

General

Feature	UL V0 Heat-aging stabilized	Halogen and red phosphorus free flame retardant
Polymer type	PA66/6 copolymer	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66/6 FR(30)
ISO 16396 designation	PA66/6,FR(30),M1H,S14-040

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.16
Molding shrinkage, parallel		ISO 294-4, 2577	%	1 - 1.2
Molding shrinkage, normal		ISO 294-4, 2577	%	1 - 1.2
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3300 / 1500
Strain at break	50 mm/min	ISO 527-1/-2	%	13 / 45
Yield stress	50 mm/min	ISO 527-1/-2	MPa	70 / 40
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2700 / 1100
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	100 / 45
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	60 / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4 / 9
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	40 / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	4 / 9

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	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
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	75
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	215
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+016
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0
Burning behaviour				
UL Yellow Card availability	Click here to have access to the UL Yellow Card → QMFZ2.E170540			
Flammability, 0.40 mm	0.40 mm	UL 94		V0
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 1.5 mm	1.5 mm	UL 94		V0
Flammability, 3.0 mm	3.0 mm	UL 94		V0
Glow-wire flammability index, GWFI, 0.40 mm	0.40 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	960
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 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	960
Glow-wire ignition temperature, GWIT, 1.5 mm	1.5 mm	IEC 60695-2-13	°C	850
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

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

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Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	260 - 280 °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.