

TECHNICAL DATA SHEET

TECHNYL PROTECT C 50H3 NC XB
(Previously DOMAMID FR 6V0M1)

Polyamide 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	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	UL-Yellow Card

Product identification

ISO 1043 abbreviation	PA6 FR(30)
ISO 16396 designation	PA6,FR(30),M1H,S14-030

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.16
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.9 - 1.1
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1

Mechanical properties

				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3500 / 1500
Strain at break	50 mm/min	ISO 527-1/-2	%	12 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	80 / 40
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3200 / 1300
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 50
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	75 / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4 / 9.5
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	3.5 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	65 / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	3.5 / 9

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Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	180
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	70
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	205

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 → E170540-100355951			
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 3.0 mm	3.0 mm	UL 94		V0
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	960
Glow-wire ignition temperature, GWIT	1-3 mm	IEC 60695-2-13	°C	750
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 natural colored products.
*: conditioned according to ISO 1110

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	230 - 250 °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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