

TECHNICAL DATA SHEET

TECHNYL PROTECT A 50X2 YL 1170
(Previously DOMAMID FR 66/6VOM YL11170)

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	UL-Yellow Card

Product identification

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

Condition	Standard	Unit	Value
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Physical properties

Condition	Standard	Unit	Value
Density	ISO 1183	g/cm ³	1.16
Molding shrinkage, parallel	ISO 294-4, 2577	%	1 - 1.2
Molding shrinkage, normal	ISO 294-4, 2577	%	1 - 1.2

Mechanical properties

Condition	Standard	Unit	Value	
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3600 / 1600
Strain at break	50 mm/min	ISO 527-1/-2	%	15 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	80 / 45
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3300 / 1450
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 55
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	80 / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	4 / 9
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	3.5 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	70 / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	3.5 / 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 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	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.