

TECHNICAL DATA SHEET

**TECHNYL PROTECT A 50X2 BK**  
(Previously DOMAMID FR 66/6VOM BK)

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
Colors available	Black	
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
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**Physical properties**

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	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	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/m <sup>2</sup>	60 / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	4 / 9
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	40 / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	4 / 9

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	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
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 → <a href="#">QMFZ2.E170540</a>			
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

**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.*