

TECHNYL® PROTECT

Flame retardants

COMMERCIAL / CORE

TECHNYL PROTECT A 50X3 BK

(Previously DOMAMID FR 66V0M BK)

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

General

Feature	UL VO Heat-aging stabilized	Halogen and red phosphorus free flame retardant
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Colors available	Black Grey	Natural
Forms	Pellets	

Product identification

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

Condition	Standard	Unit	Value
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Physical properties

Density		ISO 1183	g/cm ³	1.17
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.2 - 1.4
Molding shrinkage, normal		ISO 294-4, 2577	%	1.2 - 1.4

Mechanical properties

dam / cond.*

Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3700 / 1700
Strain at break		ISO 527-1/-2	%	13 / 40
Yield stress		ISO 527-1/-2	MPa	80 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3400 / 1600
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	115 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	70 / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	3.5 / 8
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	3.5 / -

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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	210
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	80
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	240

Electrical properties

Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0

Burning behaviour

Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 1.5 mm	1.5 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	260 - 290 °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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