

TECHNICAL DATA SHEET

**TECHNYL PROTECT A 60G1 V20 BK**  
(Previously DOMAMID FR 66G20V0E)

Polyamide 66, 20% glass fiber reinforced, halogen and red phosphorus free flame retardant, heat-aging stabilized, for injection moulding

**General**

Feature	UL V0 Heat-aging stabilized	Halogen and red phosphorus free flame retardant
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	UL-Yellow Card

**Product identification**

ISO 1043 abbreviation	PA66-GF20 FR(40)
ISO 16396 designation	PA66,GF20FR(40),M1H,S14-080

	Condition	Standard	Unit	Value
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**Physical properties**

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	1.33
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.5
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6 - 0.8
Viscosity number	96% H2SO4	ISO 307	cm <sup>3</sup> /g	145

**Mechanical properties**

dam / cond.\*

	Condition	Standard	Unit	Value
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	8500 / -
Stress at break	5 mm/min	ISO 527-1/-2	MPa	120 / -
Strain at break	5 mm/min	ISO 527-1/-2	%	3 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7500 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	180 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	45 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	6.5 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	40 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	6 / -

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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	245
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	225
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	240

**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="#">E170540-563189</a>			
Flammability, 0.75 mm	0.75 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	270 - 290 °C
Recommended mould temperature	80 - 100 °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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