

TECHNICAL DATA SHEET

**TECHNYL PROTECT A 20 V25 P BK**  
(Previously DOMAMID FR 66G25VOP1 501 BK)

Polyamide 66, 25% glass fiber reinforced, heat-aging stabilized, red phosphorous flame retardant, for injection moulding

**General**

Feature	UL V0 Red phosphorous flame retardant	Heat-aging stabilized
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	UL-Yellow Card

**Product identification**

ISO 1043 abbreviation	PA66-GF25 FR(52)
ISO 16396 designation	PA66,GF25FR(52),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>	1.35
Molding shrinkage, parallel	ISO 294-4, 2577	%	0.4 - 0.6
Molding shrinkage, normal	ISO 294-4, 2577	%	0.9 - 1.1
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg ISO 1133	cm <sup>3</sup> /10 min	30

**Mechanical properties**

dam / cond.\*

Condition	Standard	Unit	Value
Tensile modulus	1 mm/min ISO 527-1/-2	MPa	8500 / 6500
Stress at break	5 mm/min ISO 527-1/-2	MPa	145 / 105
Strain at break	5 mm/min ISO 527-1/-2	%	3 / 4.5
Flexural modulus, ISO 178	2 mm/min ISO 178	MPa	7500 / 5800
Flexural strength, ISO 178	2 mm/min ISO 178	MPa	195 / 150
Charpy impact strength, +23°C	+23°C ISO 179/1eU	kJ/m <sup>2</sup>	60 / 70
Charpy notched impact strength, +23°C	+23°C ISO 179/1eA	kJ/m <sup>2</sup>	12 / 17
Izod impact strength, +23°C	+23°C ISO 180/1U	kJ/m <sup>2</sup>	55 / 65
Izod notched impact strength, +23°C	+23°C ISO 180/1A	kJ/m <sup>2</sup>	11 / 16

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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	250
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	230
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	245

**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	575
CTI performance level category		Sol A		PLC 1

**Burning behaviour**

UL Yellow Card availability 	Click here to have access to the UL Yellow Card → <a href="#">E170540-225459</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	775
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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