

TECHNICAL DATA SHEET

**TECHNYL PROTECT C 52G3 V20 GY 7464**

Polyamide 6, 20% glass fiber reinforced, heat-aging stabilized, for injection moulding

**General**

Feature	UL V2	Heat-aging stabilized
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Colors available	Grey Red	Blue
Forms	Pellets	

**Product identification**

ISO 1043 abbreviation	PA6-GF20 FR(30)
ISO 16396 designation	PA6,GF20,M1H,S14-060

Condition	Standard	Unit	Value
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**Physical properties**

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	1.32
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.5 - 0.7
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6 - 0.8

**Mechanical properties**

	Condition	Standard	Unit	dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	6000 / 2900
Stress at break	5 mm/min	ISO 527-1/-2	MPa	80 / 50
Strain at break	5 mm/min	ISO 527-1/-2	%	3.8 / 9
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	5500 / 2900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	135 / 75
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	35 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	3.5 / 8.5
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	30 / 85
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	3 / 9

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	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	205
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	170
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	205

**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="https://www.ul.com/Products/Plastics/Flame-Retardant-Plastics/TECHNYL-PROTECT-C-52G3-V20-GY-7464">E170540-103945148</a>			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Flammability, 1.5 mm	1.5 mm	UL 94		V2
Flammability, 3.0 mm	3.0 mm	UL 94		V2
Glow-wire flammability index, GWFI, 3.0 mm	3.0 mm	IEC 60695-2-12	°C	960
Glow-wire ignition temperature, GWIT, 1.5 mm	1.5 mm	IEC 60695-2-13	°C	725
Glow-wire ignition temperature, GWIT, 3.0 mm	3.0 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)
Rear temperature	230 - 240 °C
Middle temperature	240 - 250 °C
Front temperature	250 - 260 °C
Recommended melt temperature	230 - 260 °C
Recommended mould temperature	70 - 90 °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.

### Injection notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C. Recommended time 2-4h.

### Disclaimer

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