

TECHNICAL DATA SHEET

## TECHNYL PROTECT C 52G2 MV25 NC

### TECHNYL C 52G2 MV25 NATURAL

TECHNYL PROTECT C 52G2 MV25 NC is a polyamide 6 based on a non-phosphorous and Non-halogenated flame retardant system, reinforced with 25% of mixed glass fibre and mineral filler, for injection moulding. This flame retardant grade offers a low smoke toxicity, a high glow-wire resistance and good all round mechanical properties

#### General

Polymer type	PA6	
Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Feature	arc resistant(obs)	halogen free flame retardant
Applications	electrical/electronic applications	
Colors available	natural	grey
Forms	pellets	
Processing technology	injection moulding	

#### Product identification

ISO 1043 abbreviation	PA6-(MD+GF)25 FR(30)
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Condition	Standard	Unit	Value
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#### Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm <sup>3</sup>	1.37	
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Water absorption, saturation			%	6.0
Molding shrinkage, parallel	ISO 294-4, 2577	%		0.4
Molding shrinkage, normal	ISO 294-4, 2577	%		0.7

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	7600 / 3800
Stress at break		ISO 527-1/-2	MPa	110 / 55
Strain at break		ISO 527-1/-2	%	2.6 / 11
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7400 / 3300
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	165 / 80
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	45 / 70
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	40 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	4 / 7
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m <sup>2</sup>	3 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	4.6 / 8.2

\*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	215
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	190

Condition	Standard	Unit	Value
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## Burning behaviour

UL Yellow Card availability 1	<a href="#"><b>Click here to have access to the UL Yellow Card availability 1 -&gt; QMFZ2.E44716</b></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, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 3.0 mm			°C	960
Oxygen index			%	31.0

Condition	Standard	Unit	Value
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## Electrical properties

Comparative tracking index	Solution A	IEC 60112	V	500.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	37.0

## Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	235 - 245 °C
Recommended mould temperature	60 - 90 °C

## 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.

## Injection advice

All reinforced, flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment. These DOMO Engineering Plastics

## Injection advice

issues may be magnified by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Domo recommends you adhere to the processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retardant compounds, Domo advises you to use a steel with high chromium and high carbon content (having a minimum concentration of 16% chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds' processing, please refer to your equipment manufacturers. In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.