TECHNYL® PROTECT
Flame retardants

DOMO
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TECHNICAL DATA SHEET

TECHNYL PROTECT C 52G2 MV25 GY 1783CF

(Previously TECHNYL C 52G2 MV25 GREY G 1783 CF)

TECHNYL PROTECT C 52G2 MV25 GY 1783CF 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, heat stabilized, for injection moulding. This flame retardant grade offers a low smoke toxicity, a high glow-wire resistance and good all round mechanical properties

General

Feature	Arc resistant	halogen free flame retardant
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Applications	Electrical/Electronic Applications	
Colors available	Natural	Grey
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-(MD+GF)25 FR(30)

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.37
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	8100 / 3500
Stress at break		ISO 527-1/-2	MPa	105 / 53
Strain at break		ISO 527-1/-2	%	2.4 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	43 / 75
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4 / 7
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	4.6 / 8.2
Thermal properties				
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

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Electrical properties

	Condition	Standard	Unit	Value
Comparative tracking index	Solution A	IEC 60112	V	500
CTI performance level category		Sol A		PLC 1

Burning behaviour

UL Yellow Card availability	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
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	3.0 mm	IEC 60695-2-12	°C	960
Oxygen index			%	31

**: conditioned according to ISO 1110*

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 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.

Disclaimer

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