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TECHNYL® PROTECT
Flame retardants

DOMO
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TECHNICAL DATA SHEET

TECHNYL PROTECT A 62M1 V25 BK

(Previously TECHNYL A 62M1 V25 BLACK)

TECHNYL PROTECT A 62M1 V25 BK is a polyamide 66 based on a non-halogenated retardant system, reinforced with 25% of glass pilled/fiber, for injection moulding. This grade uses a combination of additives to achieve low end part warpage while maintaining good mechanical properties with flame retardancy and electrical performance.

General

Feature	UL V0 Low warpage	Glow wire resistant
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications	Electrical/Electronic Applications
Colors available	Black	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-(GF+GM)25 FR(40)

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.38
Humidity absorption	T=23°C, 50% RH	ISO 62	%	0.85
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.85
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6
Mechanical properties				**dam / cond.***
Tensile modulus	1mm/min	ISO 527-1/-2	MPa	7200 / -
Stress at break	5mm/min	ISO 527-1/-2	MPa	105 / 85
Strain at break		ISO 527-1/-2	%	2.7 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	44 / 56
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	6 / 8
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	5 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	8 / 9

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	232
Burning behaviour				
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 1.5 mm	1.5 mm	UL 94		V0
Flammability, 3.0 mm	3.0 mm	UL 94		V0
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	960
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			%	33

**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	80
Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	265 - 275 °C
Front temperature	270 - 280 °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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