

TECHNICAL DATA SHEET

TECHNYL PROTECT A 60G1 V25 BK

DOMAMID FR 66G25V0E

Polyamide 66, 25% glass fiber reinforced, halogen and red phosphorus free flame retardant, heat-aging stabilized, for injection moulding

General

Polymer type	PA66	
Certifications	RoHS	UL listed product
Feature	halogen and red phosphorus free flame retardant UL 94 V0	heat-aging stabilized GWFI 960°C
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66-GF25 FR(40)
ISO 16396 designation	PA66,GF25FR(40),MH,S14-090

Condition	Standard	Unit	Value
-----------	----------	------	-------

Physical properties

Density		ISO 1183	g/cm³	1.37
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.5
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6 - 0.8
Viscosity number	96% H2SO4	ISO 307	cm³/g	145.0

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9500 / 6800
Stress at break	5 mm/min	ISO 527-1/-2	MPa	130 / 90
Strain at break	5 mm/min	ISO 527-1/-2	%	3 / 5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	8500 / 4500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	190 / 100
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	50 / 65
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	8 / 9.5
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	45 / 60
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	7 / 8.5

***: conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
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	235
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	245

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	<u>Click here to have access to the UL Yellow Card availability 1 -> E170540-563189</u>			
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	750
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Condition	Standard	Unit	Value
-----------	----------	------	-------

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1.0E16
Surface resistivity		IEC 62631-3-1	ohm	1.0E14
Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0

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

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

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufactures in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.