

TECHNICAL DATA SHEET

TECHNYL PROTECT AT 20 V25 P NC
DOMAMID FR 66G25V0P1A NC33



Polyamide 66/PET, 25% glass fiber reinforced, heat-aging stabilized, red phosphorous flame retardant, for injection moulding

General

Polymer type	PA66 + PET blend		
Certifications	RoHS EC 1907/2006 (REACH)	UL listed product	
Feature	heat-aging stabilized UL 94 V0	red phosphorous flame retardant GWFI 960°C	
Colors available	black grey	natural	
Forms	pellets		
Processing technology	injection moulding		

Product identification

ISO 1043 abbreviation	PA66+PET-GF25 FR(52)
ISO 16396 designation	PA66+PET,GF25FR(52),MH,S14-080

Condition	Standard	Unit	Value
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Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm ³	1.36	
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.5 - 1.6
Water absorption	24 hr, 23°C	ISO 62	%	0.65 - 0.75
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4 - 0.6
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm ³ /10 min	28.0
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	145.0

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	8000 / 6100
Stress at break	5 mm/min	ISO 527-1/-2	MPa	135 / 100
Strain at break	5 mm/min	ISO 527-1/-2	%	3 / 4.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7000 / 5400
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	190 / 140
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	60 / 70
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	11 / 16
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	55 / 65
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	10 / 16

*: **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	230
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	245

Condition	Standard	Unit	Value
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Burning behaviour

UL Yellow Card availability 1	Click here to have access to the UL Yellow Card availability 1 -> E170540-101492181			
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			°C	960
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	>= 960
Glow-wire ignition temperature, GWIT, 0.75 mm	0.75 mm	IEC 60695-2-13	°C	750
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	775
Glow-wire ignition temperature, GWIT	1-3 mm	IEC 60695-2-13	°C	775
Oxygen index			%	27.0
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Condition	Standard	Unit	Value
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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	575.0
CTI performance level category		Sol A		PLC 1

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
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Processing conditions

Suggested max moisture	0.12 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended melt temperature	270 - 290 °C
Recommended mould temperature	70 - 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.