

# TECHNYL® A 60G1 V25 BLACK 2N

Polyamide 66  
Solvay Engineering Plastics

Message:

TECHNYL® A 60G1 V25 Black 2N is a Non-halogenated flame retardant polyamide 66 reinforced with 25% of glass fiber, heat stabilized, for injection moulding. This grade offers excellent flame retardancy properties (UL 94, 5VA, GWIT) combined with excellent processing, mechanical and electrical performance. It can withstand temperatures of 160°C for over 6000 hours and has a UL F1 rating for weatherability resistance

General Information			
UL YellowCard	E44716-100870482	E44716-535818	
Filler / Reinforcement	Glass fiber reinforced material, 25% filler by weight		
Additive	heat stabilizer		
	Flame retardancy		
Features	Halogen-free		
Uses	Electrical/Electronic Applications		
Agency Ratings	EC 1907/2006 (REACH)		
	EN 45545		
	NF F 16-101		
	UL QMFZ2		
RoHS Compliance	RoHS compliance		
Appearance	White		
	Black		
	Grey		
	Blue		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PA66-GF25 FR(40)		
Physical	Nominal Value	Unit	Test Method
Density	1.38	g/cm³	ISO 1183/A
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	9400	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	130	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.0	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	53	kJ/m²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load			
0.45 MPa, not annealed	260	°C	ASTM D648
1.8 MPa, not annealed	246	°C	ASTM D648
1.8 MPa, not annealed	247	°C	ISO 75-2/Af
Melting Temperature	263	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+15	ohms	IEC 60093
Volume Resistivity	6.0E+14	ohms·cm	IEC 60093
Dielectric Strength (0.800 mm)	35	kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.8 mm	V-0		UL 94
	V-0		
1.6 mm	5VA		UL 94
	V-0		
3.2 mm	5VA		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
0.8 mm	960	°C	IEC 60695-2-12
1.6 mm	960	°C	IEC 60695-2-12
3.2 mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.8 mm	775	°C	IEC 60695-2-13
1.6 mm	775	°C	IEC 60695-2-13
Oxygen Index	33	%	ISO 4589-2
French Fire Index	F3		NF F16-101
French Smoke Index	I3		NF F16-101
European Railways Certifications			EN 45545-2
R22	HL3		EN 45545-2
R23	HL3		EN 45545-2
Injection	Nominal Value	Unit	
Drying Temperature	80	°C	
Suggested Max Moisture	0.20	%	
Rear Temperature	265 - 275	°C	
Middle Temperature	265 - 275	°C	
Front Temperature	270 - 280	°C	
Mold Temperature	60 - 90	°C	

## Injection instructions

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 mini -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 can be worsened by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process.

Therefore, Solvay recommends to use the advised processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retarded compounds, Solvay advises to use a steel containing high chromium & high carbon content (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. For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature at 120°C. Of course it should be noted that this improvement in the surface appearance may be at the expense of the cycle time.

The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

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## Recommended distributors for this material

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