TECHNYL® A 21T3 V25 BLACK 15N

Polyamide 66

Solvay Engineering Plastics

Message:

TECHNYL® A 21T3 V25 Black 15N is a Red Phosphorous flame retardant polyamide 66, reinforced with 25% of glass fibre, heat stabilized, impact improved, for injection moulding. This flame retardant grade offers excellent filling qualities and with good mechanical properties. This grade is stabilized to offer a very low migration and corrosion of metallic contacts.

General Information			
UL YellowCard	E44716-100316402	E44716-101495760	E44716-102572325
Filler / Reinforcement	Glass fiber reinforced material, 25% filler by weight		
Additive	heat stabilizer Flame retardancy		
Features	Impact resistance, good		
Uses	Electrical/Electronic Applications		
Agency Ratings	EC 1907/2006 (REACH) UL QMFZ2		
RoHS Compliance	RoHS compliance		
Appearance	Black		
Forms	Particle		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PA66-GF25 FR(52)		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.31	--	g/cm³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	0.90	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.1	--	%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	8000	5400	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	130	70.0	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.7	4.0	%	ISO 527-2
Flexural Modulus (23°C)	7900	5200	MPa	ISO 178
Flexural Stress (23°C)	200	155	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	6.0	--	kJ/m²	ISO 179/1eA
23°C	7.0	9.0	kJ/m²	ISO 179/1eA

Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	60	--	kJ/m²	ISO 179/1eU
23°C	57	65	kJ/m²	ISO 179/1eU
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	230	--	°C	ISO 75-2/Af
Melting Temperature	263	--	°C	ISO 11357-3
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Dielectric Strength (0.800 mm)	37	--	kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	500	--	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
	V-2			
0.8 mm	V-0	--		UL 94
1.6 mm	V-0	--		UL 94
3.2 mm	V-0	--		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	930	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
1.6 mm	725	--	°C	IEC 60695-2-13
3.2 mm	800	--	°C	IEC 60695-2-13
Oxygen Index	28	--	%	ISO 4589-2
Injection	**Dry**	**Unit**		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	265 - 275		°C	
Middle Temperature	270 - 280		°C	
Front Temperature	280 - 290		°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 2-4hInjection 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

Recommended distributors for this material

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