TECHNYL STAR® AFX 60G1 V45 GREY 2633

Polyamide 66

Solvay Engineering Plastics

Message:

TECHNYL STAR® AFX 60G1 V45 Grey 2633 is a Non-halogenated flame retardant grade a high flow polyamide 66 resin, reinforced of 45% of glass fiber, heat stabilized, for injection moulding. This grade offers excellent electrical properties combined with flame retardancy performance

General Information	
UL YellowCard	E44716-101350125
Filler / Reinforcement	Glass fiber reinforced material, 45% filler by weight
Additive	heat stabilizer Flame retardancy
Features	Excellent appearance Rigidity, high High liquidity Good demoulding performance Halogen-free
Uses	Electrical/Electronic Applications
Agency Ratings	EC 1907/2006 (REACH) EN 45545 UL QMFZ2
Appearance	Grey Blue
Forms	Particle
Processing Method	Injection molding
Resin ID (ISO 1043)	PA66-GF45 FR(40)

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm³	ISO 1183/A
Water Absorption (23°C, 24 hr)	0.60	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	17300	12000	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	180	130	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.0	3.1	%	ISO 527-2
Flexural Modulus (23°C)	13400	10900	MPa	ISO 178
Flexural Stress (23°C)	290	210	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**

Charpy Notched Impact Strength (23°C)	9.7	11	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	64	59	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	8.0	10	kJ/m²	ISO 180
Unnotched Izod Impact Strength (23°C)	53	53	kJ/m²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	250	--	°C	ISO 75-2/Af
Melting Temperature	263	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	6.7E+15	--	ohms	IEC 60093
Volume Resistivity	1.1E+15	--	ohms·cm	IEC 60093
Dielectric Strength (2.00 mm)	44	--	kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
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
Oxygen Index	34	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	260 - 270		°C	
Middle Temperature	265 - 275		°C	
Front Temperature	265 - 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 2-4hInjection 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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