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

Filet / Reinforcement	General Information						
Additive	UL YellowCard		E44716-101350125				
Fame retardancy	Filler / Reinforcement		Glass fiber reinforced material, 45% filler by weight				
Features	Additive		heat stabilizer				
Rigidity, high High liquidity Good demoulding performance Halogen-free			Flame retardancy				
Rigidity, high High liquidity Good demoulding performance Halogen-free							
High liquidity	Features						
Conditioned February Conditioned February Feb							
Halogen-free			High liquidity				
See			Good demoulding performance				
Agency Ratings EC 1907/2006 (REACH) EN 45545 UL QMFZ2 Appearance Grey Blue Forms Particle Processing Method Injection molding Resin ID (ISO 1043) Physical Dry Conditioned Unit Test Method Density 1,57 0,60 0,60 100 Mea Maa ISO 183/A Mea Tensile Modulus (23°C) 17300 12000 MPa 1SO 527-2/1A Tensile Streis (Break, 23°C) 13400 10900 MPa 150 178 ISO 178 ISO 178 ISO 178 ISO 178			Halogen-free				
EN 45545 UL QMFZ2 Appearance Grey Blue Forms Particle Processing Method Injection molding Resin ID (ISO 1043) Physical Dry A66-GF45 FR(40) Physical Dry Conditioned Unit Test Method Density 1.57 Conditioned Unit Test Method Density 1.57 So g/cm³ ISO 1183/A Water Absorption (23°C, 24 hr) hr) 0.60 Conditioned Unit Test Method ISO 62 Mechanical Dry Conditioned Unit Test Method 1SO 62 Mechanical Dry Conditioned Unit Test Method 1SO 527-2/1A Tensile Stress (Break, 23°C) 17300 1300 MPa ISO 527-2/1A Tensile Strain (Break, 23°C) 2.0 3.1 10900 MPa ISO 178 ISO 178 ISO 178	Uses		Electrical/Electronic Applications				
Appearance	Agency Ratings		EC 1907/2006 (REACH)				
Appearance Appearance Forms Forms Particle Processing Method Injection molding Resin ID (ISO 1043) Physical Dry Conditioned Unit Test Method 15O 1283/A Water Absorption (23°C, 24 hr) N) Mehanical Dry Conditioned Mehanical Dry Conditioned MPa 1SO 527-2/1A Tensile Stress (Break, 23°C) 180 130 MPa 1SO 527-2/1A Tensile Strain (Break, 23°C) 13400 19000 MPa 1SO 178 MPa 1SO 178 ISO 178 ISO 178 ISO 178			EN 45545				
Forms			UL QMFZ2				
Forms							
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) % 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 Flexural Modulus (23°C) 13400 19900 MPa ISO 178 Flexural Stress (23°C) 290 210 MPa ISO 178	Appearance		Grey				
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) % 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			Blue				
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) % 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							
PA66-GF45 FR(40) Physical Dry Conditioned Unit Test Method Density 1.57 g/cm³ ISO 1183/A Water Absorption (23°C, 24 hr) % 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	Forms		Particle				
Physical Dry Conditioned Unit Test Method Density 1.57 g/cm³ ISO 1183/A Water Absorption (23°C, 24 hr) % 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	Processing Method		Injection molding				
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	Resin ID (ISO 1043)		PA66-GF45 FR(40)				
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	Physical	Dry	Conditioned	Unit	Test Method		
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	Density	1.57		g/cm³	ISO 1183/A		
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	Water Absorption (23°C, 24 hr)	0.60		%	ISO 62		
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	Mechanical	Dry	Conditioned	Unit	Test Method		
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	Tensile Modulus (23°C)	17300	12000	MPa	ISO 527-2/1A		
Flexural Modulus (23°C) 13400 10900 MPa ISO 178 Flexural Stress (23°C) 290 210 MPa ISO 178	Tensile Stress (Break, 23°C)	180	130	MPa	ISO 527-2/1A		
Flexural Stress (23°C) 290 210 MPa ISO 178	Tensile Strain (Break, 23°C)	2.0	3.1	%	ISO 527-2		
	Flexural Modulus (23°C)	13400	10900	MPa	ISO 178		
Impact Dry Conditioned Unit Test Method	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			
	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	
·····aa.e ··e····pe··ata.e				
·	265 - 280		°C	
Front Temperature Mold Temperature	265 - 280 60 - 90		°C	

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

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT