TECHNYL® C 52G1 WHITE 2297 CF

Polyamide 6

Solvay Engineering Plastics

Message:

TECHNYL® C 52G1 White 2297 CF is an unfilled Non-phosphorous and Non-halogenated flame retardant polyamide 6, heat stabilized, for injection moulding. This flame retardant grade has an excellent mouldability and mechanical properties combined with very stable glow wire performance.

General Information				
UL YellowCard	E44716-235533			
Additive	heat stabilizer Flame retardancy			
Features	Phosphorus content, low (to none) Halogen-free			
Uses	Electrical/Electronic Applications			
Agency Ratings	EC 1907/2006 (REACH) UL QMFZ2			
Appearance	White Black Grey			
Forms	Particle			
Processing Method	Injection molding			
Resin ID (ISO 1043)	PA6 FR(30)			
Physical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Density	1.18	--	g/cm³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	2.0	--	%	ISO 62
Equilibrium, 23°C, 50% RH	3.1	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	3500	1000	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	90.0	40.0	MPa	ISO 527-2/1A
Fracture, 23°C	80.0	40.0	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	10	> 150	%	ISO 527-2
Flexural Modulus (23°C)	3400	1000	MPa	ISO 178
Flexural Stress (23°C)	125	40.0	MPa	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**

Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.0	--	kJ/m²	ISO 179/1eA
23°C	4.0	15	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	100	--	kJ/m²	ISO 179/1eU
23°C	90 kJ/m²	No Break		ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	193	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	45.0	--	°C	ISO 75-2/Af
Melting Temperature	220	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+13	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Strength (0.800 mm)	33	--	kV/mm	IEC 60243-1
Relative Permittivity	3.60	4.00		IEC 60250
Dissipation Factor	0.020	0.060		IEC 60250
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.8 mm	V-2	--		UL 94
1.6 mm	V-2	--		UL 94
3.2 mm	V-2	--		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
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	230 - 235		°C	
Middle Temperature	235 - 240		°C	
Front Temperature	235 - 245		°C	
Mold Temperature	60 - 80		°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.

Recommended distributors for this material

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