TECHNYL® C 52G3 MZ25 GREY R7035 CN

Polyamide 6

Solvay Engineering Plastics

Message:

TECHNYL® C 52G3 MZ25 Grey R7035 CN is a Non-phosphorous and Non-halogenated flame retardant polyamide 6, reinforced with 25% of mineral filler, heat stabilized, for injection moulding. This grade offers a robust glow wire resistance, combined with enhanced processing behavior suitable for thin wall parts.

General Information							
UL YellowCard		E44716-457081					
Filler / Reinforcement		Mineral filler, 25% filler by weight					
Additive		heat stabilizer					
		Flame retardancy					
Features		UV Laser Markable					
		Anti-arc					
		Phosphorus content, low (to none)					
		Halogen-free	Halogen-free				
Uses		Electrical/Electronic Applications	Electrical/Electronic Applications				
Agency Ratings		UL QMFZ2	UL QMFZ2				
Appearance		Black					
		Grey					
Forms		Particle					
Processing Method		Injection molding					
Resin ID (ISO 1043)		PA6-MD25 FR(30)					
Physical	Dry	Conditioned	Unit	Test Method			
Density	1.37		g/cm³	ISO 1183/A			
Water Absorption				ISO 62			
23°C, 24 hr	1.1		%	ISO 62			
Saturated, 23°C	6.0		%	ISO 62			
Equilibrium, 23°C, 50%	2.2		24	100.00			
RH	2.3		%	ISO 62			
Mechanical	Dry	Conditioned	Unit	Test Method			
Tensile Modulus (23°C)	6900	2800	MPa	ISO 527-2/1A			
Tensile Strength				ACTA I 7 COC			
Fracture, 23°C	80.0		MPa	ASTM D638			
Fracture, 23°C	80.0	35.0	MPa	ISO 527-2/1A			
Tensile Elongation (Break,							

23°C 6700 MPa					
290C 6000 2900 MPa ISO 178 ISO 178 ISO 178 ISO 178 ISO 178 ISO 178 ISO 179 ISO 179	Flexural Modulus				
Personal Strength	23°C	6700		MPa	ASTM D790
29°C	23°C	6900	2900	MPa	ISO 178
145 145 145 150 178	Flexural Strength				
Part	23°C	130		MPa	ASTM D790
Scot 179/1eA Scot	23°C	145	55.0	MPa	ISO 178
Strength	Impact	Dry	Conditioned	Unit	Test Method
150 179/1eA 150 179/1eB	Charpy Notched Impact Strength				ISO 179/1eA
Stormpt Unnot ched Impact Stormpt Unnot ched Impact Stormpt Unnot ched Impact Unnot ched University University	-30°C	3.0		kJ/m²	ISO 179/1eA
Strength Strength	23°C	3.0	3.5	kJ/m²	ISO 179/1eA
23°C 45 90	Charpy Unnotched Impact Strength				ISO 179/1eU
Notice Italian Notice It	-30°C	45		kJ/m²	ISO 179/1eU
23°C) 45	23°C	45	90	kJ/m²	ISO 179/1eU
The at Deflection Femperature 0.45 MPa, not annealed 200 C SO 75-2/Bf 1.8 MPa, not annealed 150 C SO 150 75-2/Bf 1.8 MPa, not annealed 145 C SO 150 75-2/Af Melting Temperature 222 SO 150 11357-3 Electrical Dry Conditioned Unit Test Method Dielectric Strength (0.800 Mm) 37 SO 150 11357-3 Electrical Dry Conditioned Unit Test Method Dielectric Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Dry Conditioned Unit Test Method Dielectric Strength (0.800 Mm) 450 SO 150 11357-3 Electric Biammability Dry Conditioned Unit Test Method Electric Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Die Strength (0.800 Mm) 450 SO 150 11357-3 Electrical Dry Mm 450 SO 150 11357-3 Electrical	Notched Izod Impact (23°C)	45		J/m	ASTM D256
The at Deflection Femperature 0.45 MPa, not annealed 200 C SO 75-2/Bf 1.8 MPa, not annealed 150 C SO 150 75-2/Bf 1.8 MPa, not annealed 145 C SO 150 75-2/Af Melting Temperature 222 SO 150 11357-3 Electrical Dry Conditioned Unit Test Method Dielectric Strength (0.800 ST	Thermal	Dry	Conditioned	Unit	Test Method
1.8 MPa, not annealed	Heat Deflection Temperature	,			
1.8 MPa, not annealed	0.45 MPa, not annealed	200		°C	ISO 75-2/Bf
Part	1.8 MPa, not annealed	150		°C	ASTM D648
Conditioned Dry Conditioned Unit Test Method	1.8 MPa, not annealed	145		°C	ISO 75-2/Af
Name	Melting Temperature	222		°C	ISO 11357-3
Name	Electrical	Dry	Conditioned	Unit	Test Method
Index (Solution A) 450 V IEC 60112 Elammability Dry Conditioned Unit Test Method Flammability UL 94 UL 94 0.8 mm V-2 UL 94 1.6 mm V-2 UL 94 3.2 mm V-2 UL 94 Slow Wire Flammability andex IEC 60695-2-12 IEC 60695-2-12 1.6 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 3.2 mm 960 °C IEC 60695-2-12 Oxygen Index 31 % ISO 4589-2 Origing Temperature 80 - °C IEC 60695-2-12 Oxygested Max Moisture 0.20 With *	Dielectric Strength (0.800 mm)	37		kV/mm	IEC 60243-1
No. 8 mm	Comparative Tracking Index (Solution A)	450		V	IEC 60112
0.8 mm V-2 UL 94 1.6 mm V-2 UL 94 3.2 mm V-2 UL 94 Slow Wire Flammability Index IEC 60695-2-12 IEC 60695-2-12 0.8 mm 960 °C IEC 60695-2-12 1.6 mm 960 °C IEC 60695-2-12 20xygen Index 31 °C IEC 60695-2-12 Oxygen Index 31 % ISO 4589-2 Origing Temperature 80 °C ISO 4589-2 Oxygen Index 90 °C ISO 4589-2 Oxygen Index 90 <t< td=""><td>Flammability</td><td>Dry</td><td>Conditioned</td><td>Unit</td><td>Test Method</td></t<>	Flammability	Dry	Conditioned	Unit	Test Method
1.6 mm V-2 UL 94 3.2 mm V-2 UL 94 Slow Wire Flammability 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 0xygen Index 31 °C IEC 60695-2-12 0xygen Index 31 °C IEC 60695-2-12 0xygen Index 31	Flame Rating				UL 94
3.2 mm V-2 UL 94	0.8 mm	V-2			UL 94
Silow Wire Flammability IEC 60695-2-12 IEC 60695-2-12	1.6 mm	V-2			UL 94
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 Oxygen Index 31 % ISO 4589-2 Orying Temperature 80 °C Suggested Max Moisture 0.20 %	3.2 mm	V-2			UL 94
1.6 mm 960 °C IEC 60695-2-12 3.2 mm 960 °C IEC 60695-2-12 Dxygen Index 31 % ISO 4589-2 njection Dry Unit Drying Temperature 80 °C Suggested Max Moisture 0.20 %	Glow Wire Flammability Index				IEC 60695-2-12
3.2 mm 960 °C IEC 60695-2-12 Dxygen Index 31 % ISO 4589-2 Injection Dry Unit Drying Temperature 80 °C Suggested Max Moisture 0.20 %	0.8 mm	960		°C	IEC 60695-2-12
Daygen Index 31 % ISO 4589-2 njection Dry Unit Drying Temperature 80 °C Suggested Max Moisture 0.20 %	1.6 mm	960		°C	IEC 60695-2-12
njection Dry Unit Drying Temperature 80 °C Suggested Max Moisture 0.20 %	3.2 mm	960		°C	IEC 60695-2-12
Orying Temperature 80 °C Suggested Max Moisture 0.20 %	Oxygen Index	31		%	ISO 4589-2
Suggested Max Moisture 0.20 %	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 - 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.

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