

# TECHNYL® C 52G3 MZ25 GREY RAL 7541U

Polyamide 6  
Solvay Engineering Plastics

Message:

TECHNYL® C 52G3 MZ25 Grey RAL 7541U 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		
Uses		Electrical/Electronic Applications		
Agency Ratings		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/cm <sup>3</sup>	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% RH	2.3	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6900	2800	MPa	ISO 527-2/1A
Tensile Strength				
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)	3.0	--	%	ASTM D638, ISO 527-2

Flexural Modulus				
23°C	6700	--	MPa	ASTM D790
23°C	6900	2900	MPa	ISO 178
Flexural Strength				
23°C	130	--	MPa	ASTM D790
23°C	145	55.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	3.0	--	kJ/m <sup>2</sup>	ISO 179/1eA
23°C	3.0	3.5	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	45	--	kJ/m <sup>2</sup>	ISO 179/1eU
23°C	45	90	kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact (23°C)				ASTM D256
23°C	45	--	J/m	ASTM D256
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	200	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	150	--	°C	ASTM D648
1.8 MPa, not annealed	145	--	°C	ISO 75-2/Af
Melting Temperature	222	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Dielectric Strength (0.800 mm)				IEC 60243-1
37	--	kV/mm	IEC 60243-1	
Comparative Tracking Index (Solution A)				IEC 60112
500	--	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 (0.8 mm)				IEC 60695-2-12
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	240 - 250	°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 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

