TECHNYL®

TECHNYL® C 52G1 V20 GREY R7035 CF

TECHNICAL DATA SHEET

Revised: April, 2019

TECHNYL® C 52G1 V20 Grey R7035 CF is a polyamide 6 based on a non-phosphorous and non-halogenated flame retardant system, reinforced with 20% of glass fiber, heat stabilized, for injection moulding. This is a flame retardant grade with excellent moulding and electrical performance.

GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East	• Europe
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight	
Additive	• Flame Retardant	• Heat Stabilizer
Key Benefits	• Arc Resistance • Glow Wire Resistance	• UV Laser Markable • UL 94 V2 at 0.8 mm
Applications	• Circuit Breaker • Electrical protection devices	• Electrical/Electronic Applications
Certification/Compliance	• EC 1907/2006 (REACH) • EN 45545	• UL QMFZ2
Colors Available	• Grey	• White
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6-GF20 FR(30)	

PROPERTIES

Typical values of properties are for Grey grades

Physical	Dry	Conditioned	Unit	Test Method
Water Absorption (24 hr, 23°C)	1.1		%	ISO 62
Density	1.28		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6500		MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	78		MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.6		%	ISO 527-2

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210		°C	ISO 75-2/Bf
1.8 MPa, Unannealed	170		°C	ISO 75-2/Af
Melting Temperature	222		°C	ISO 11357-3

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Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength				IEC 60243-1
0.800 mm	31		kV/mm	
2.00 mm	27		kV/mm	
Comparative Tracking Index (Solution A)	425		V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.8 mm	V-2			
1.6 mm	V-2			
3.2 mm	V-2			
Glow Wire Flammability Index				IEC
0.8 mm	960		°C	60695-2-12
1.6 mm	960		°C	
3.2 mm	960		°C	
Oxygen Index	29		%	ISO 4589-2

Additional Information	Dry	Unit	Test Method
European Railways Certifications			
R22	HL2		EN 45545-2
R23	HL2		GE

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
Rear Temperature	230 to 235	°C
Middle Temperature	235 to 240	°C
Front Temperature	240 to 250	°C
Mold Temperature	60 to 90	°C

Injection Notes

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 2-4h

Injection Advice:

- All reinforced, flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment. These issues may be magnified by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Solvay recommends you adhere to the processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retardant compounds, Solvay advises you to use a steel with high chromium and high carbon content (having a 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. In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.

DISCLAIMER

SAFETY INFORMATION

Detailed information regarding safety are available on the safety data sheet (SDS). SDS is sent with the first material order or available by contacting our customer services

REGULATIONS COMPLIANCE

This product is not intended to be used for the following regulated market: food contact, drinking water, toys, cosmetics or medical devices.

Grades produced or imported in Europe comply with REACH directive 1907/2006/EC as amended.

CUSTOMER SERVICES

Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

You can find more information on Solvay Product range on our internet product finder at the following address: http://www.technyl.com

Notes

Typical properties: these are not to be construed as specifications.