TECHNYL®

TECHNYL® C 52G2 MV25 NATURAL

TECHNICAL DATA SHEET

Revised: April, 2017

TECHNYL® C 52G2 MV25 Natural is a polyamide 6 based on a non-phosphorous and Non-halogenated flame retardant system, reinforced with 25% of mixed glass fibre and mineral filler, for injection moulding. This flame retardant grade offers a low smoke toxicity, a high glow-
wire resistance and good all round mechanical properties

GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific	• Europe
Filler / Reinforcement	• Glass\Mineral, 25% Filler by Weight	
Additive	• Flame Retardant	• Heat Stabilizer
Key Benefits	• Arc Resistance • Glow Wire Resistance	• UL 94 V2 at 0.8 mm
Applications	• Circuit Breaker • Electrical protection devices	• Electrical/Electronic Applications
Certification/Compliance	• EC 1907/2006 (REACH)	• UL QMFZ2
RoHS Compliance	• RoHS Compliant	
Colors Available	• Grey	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6-(MD+GF)25 FR(30)	

PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	0.70		%	
Flow	0.40		%	
Water Absorption				ISO 62
24 hr, 23°C	1.1		%	
Saturation, 23°C	6.0		%	
Equilibrium, 23°C, 50% RH	2.3		%	
Density	1.37		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7600	3800	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	110	55	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.6	11	%	ISO 527-2
Flexural Modulus (23°C)	7400	3300	MPa	ISO 178

Solvay Engineering Plastics
www.solvay.com - www.technyl.com

Tel: 00 800 55 400 600
technyl-emea@solvay.com - Europe, Middle East, Africa
technyl-apac@solvay.com - Asia Pacific
technyl-americas@solvay.com - Americas

SOLVAY
asking more from chemistry®

Mechanical	Dry	Conditioned	Unit	Test Method
Flexural Stress (23°C)	165	80.0	MPa	ISO 178
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	3.0		kJ/m²	
23°C	4.0	7.0	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	40		kJ/m²	
23°C	45	70	kJ/m²	
Notched Izod Impact Strength (23°C)	4.6	8.2	kJ/m²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	215		°C	ISO 75-2/Bf
1.8 MPa, Unannealed	190		°C	ISO 75-2/Af
Melting Temperature	222		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Electric Strength (0.800 mm)	37		kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	500		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 60695-2-12
1.6 mm	960		°C	
3.2 mm	960		°C	
Oxygen Index	31		%	ISO 4589-2

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	235 to 245	°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.

This grade complies with ROHS Directive 2011/65/EU and 2015/863 as amended.

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

CUSTOMER SERVICES

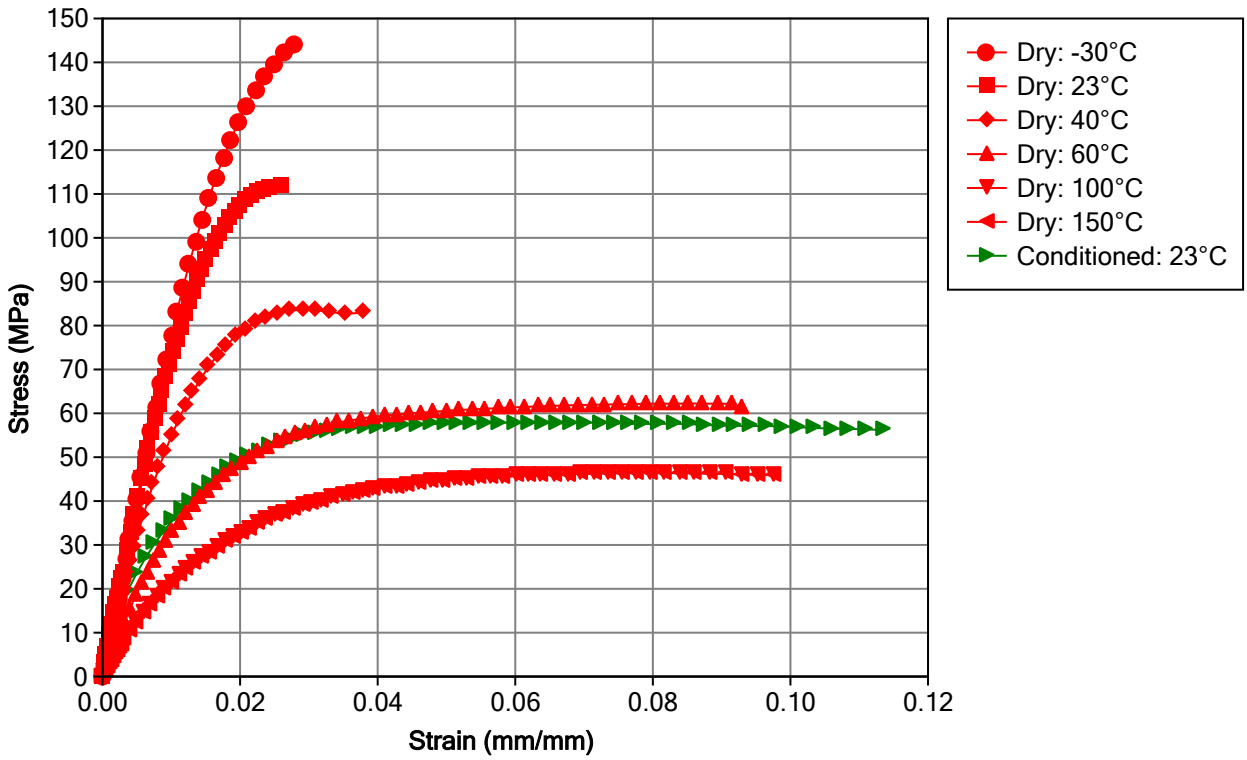
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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

MULTIPOINT DATA

Isothermal Stress vs. Strain (ISO 11403-1)



Notes

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