TECHNYL®

TECHNYL® C 548B BLACK

TECHNICAL DATA SHEET

Revised: October, 2016

TECHNYL® C 548B Black is an unreinforced polyamide 6, high viscosity, for extrusion blow-moulding. This grade offers a good processing behaviour, high impact resistance even at low temperature and high barrier properties especially to fluids such as fuels and oils, as well as a high toughness.

GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific	• Europe
Additive	• Heat Stabilizer	• Impact Modifier
Key Benefits	• Heat Stabilized (Inorganic) • High Impact Resistance • Low Temperature Impact Resistance	• High Melt Strengh • Good Mold Release • High Viscosity
Applications	• Fuel lines • Fuel tanks	• Motorcycles • Turbocharger air ducts
Certification/Compliance	• EC 1907/2006 (REACH)	
RoHS Compliance	• RoHS Compliant	
Colors Available	• Black	
Forms	• Pellets	
Processing Method	• Blow Molding	• Extrusion
Resin ID (ISO 1043)	• PA6	

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Conditioned	Unit	Test Method
Water Absorption				ISO 62
24 hr, 23°C	1.2		%	
Equilibrium, 23°C, 50% RH	2.6		%	
Density	1.07		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	1900	500	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	48	40	MPa	
Break, 23°C	40	38	MPa	
Tensile Elongation				
Break, 23°C	150		%	ASTM D638
Break, 23°C	60	> 100	%	ISO 527-2
Flexural Modulus (23°C)	1750	850	MPa	ISO 178
Flexural Stress (23°C)	70.0	45.0	MPa	ISO 178

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Mechanical	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	16		kJ/m²	
23°C	100	No Break	kJ/m²	
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU
Notched Izod Impact Strength (23°C)	90		kJ/m²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	80		°C	ISO 75-2/Bf
1.8 MPa, Unannealed	55		°C	ISO 75-2/Af
Melting Temperature	222		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+15	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+13	ohms·cm	IEC 60093
Electric Strength (2.00 mm)		17	kV/mm	IEC 60243-1
Relative Permittivity	3.70	4.00		IEC 60250
Dissipation Factor	0.020	0.12		IEC 60250

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.6 mm)	HB			UL 94
Glow Wire Flammability Index (1.6 mm)	650		°C	IEC 60695-2-12

Extrusion	Dry	Unit
Suggested Max Moisture	0.080	%
Cylinder Zone 1 Temp.	210 to 230	°C
Cylinder Zone 2 Temp.	220 to 240	°C
Adapter Temperature	220 to 240	°C
Die Temperature	215 to 235	°C

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Extrusion 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.

Blow Molding Mold Temperature: 40 to 60°C

Blow Molding Head Temperature: 220 to 240°C

DISCLAIMER

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and it is in no way binding. This information must on no account be used as a substitutive for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANDABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document, and Solvay is at their disposal to supply any additional information.

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

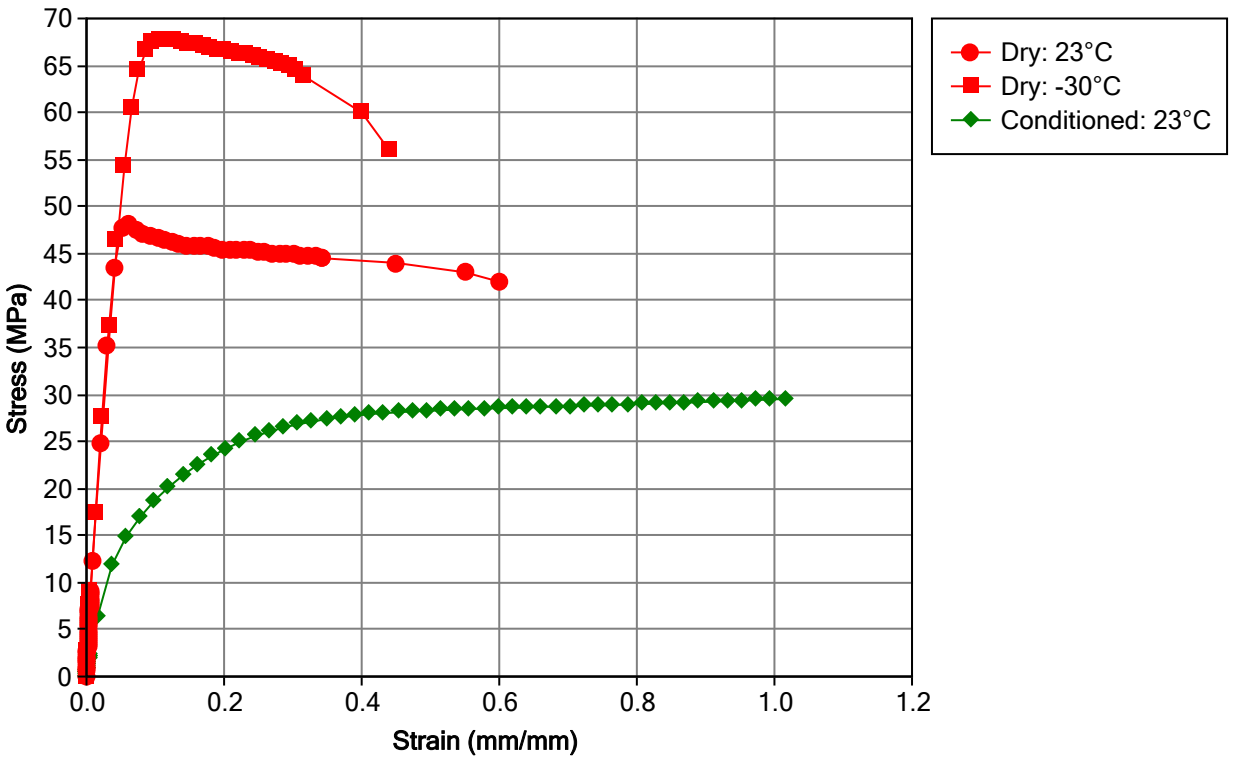
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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

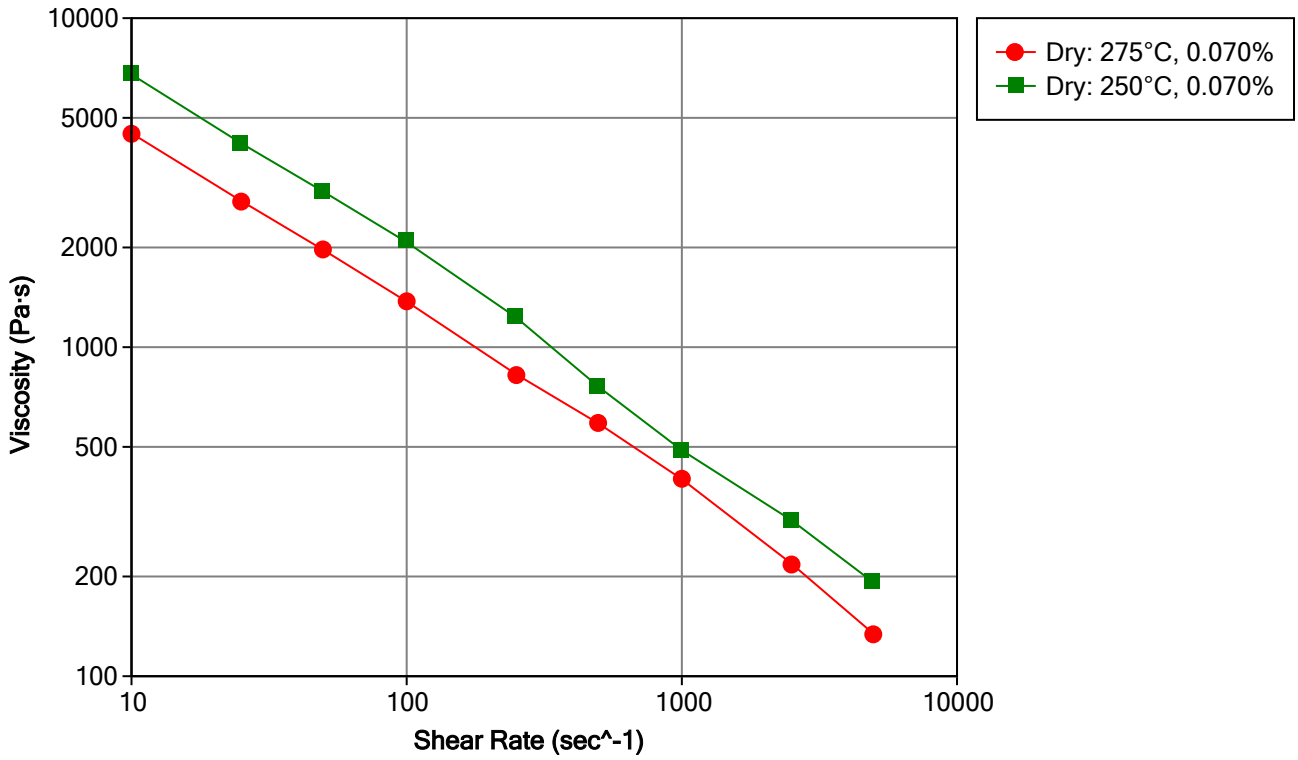
You can find more information on Solvay Product range on our internet product finder at the following address: http://www.technyl.com

MULTIPOINT DATA

Isothermal Stress vs. Strain (ISO 11403-1)



Viscosity vs. Shear Rate (ISO 11403-2)



Notes

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

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