TECHNYL®

TECHNYL® C 218 V35 BLACK 21N

TECHNICAL DATA SHEET

Revised: October, 2018

TECHNYL® C 218 V35 Black 21N is a polyamide 6, reinforced with 35% of glass fiber, heat stabilized, for injection moulding. The product offers an excellent combination between thermal and mechanical properties.

GENERAL

Material Status	• Commercial: Active	
Availability	• Asia Pacific	
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight	
Additive	• Heat Stabilizer	
Key Benefits	• Good Flow • Heat Stabilized (Inorganic)	• Good Mold Release
Applications	• Air intake manifolds • Automotive applications	• Electrical/Electronic Applications • Engine covers
RoHS Compliance	• RoHS Compliant	
Colors Available	• Black	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA6-GF35	

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	0.70		%	
Flow	0.25		%	
Water Absorption				ISO 62
24 hr, 23°C	0.85		%	
Saturation, 23°C	2.1		%	
Equilibrium, 23°C, 50% RH	1.9		%	
Density	1.41		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	11000	6500	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	175	110	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.2	7.0	%	ISO 527-2
Flexural Modulus				
23°C	9600		MPa	ASTM D790
23°C	9600	6000	MPa	ISO 178

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Mechanical	Dry	Conditioned	Unit	Test Method
Flexural Strength				
23°C	260		MPa	ASTM D790
23°C	280	185	MPa	ISO 178
Charpy Notched Impact Strength (23°C)	17	19	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				
23°C	83	94	kJ/m²	ISO 179/1eU
23°C	74	80	kJ/m²	ISO 179/1fU
Notched Izod Impact Strength (23°C)	15	28	kJ/m²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
1.8 MPa, Unannealed	205		°C	ASTM D648
1.8 MPa, Unannealed	210		°C	ISO 75-2/Af
Melting Temperature	222		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+13	ohms·cm	IEC 60093
Electric Strength (2.00 mm)		22	kV/mm	IEC 60243-1
Relative Permittivity (23°C, 2.00 mm, 1 MHz)	2.50			IEC 60250
Dissipation Factor (1 MHz)	0.023			IEC 60250
Comparative Tracking Index (Solution A)	400		V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Glow Wire Flammability Index				IEC 60695-2-12
1.6 mm	650		°C	
3.2 mm	650		°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.

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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.

CUSTOMER SERVICES

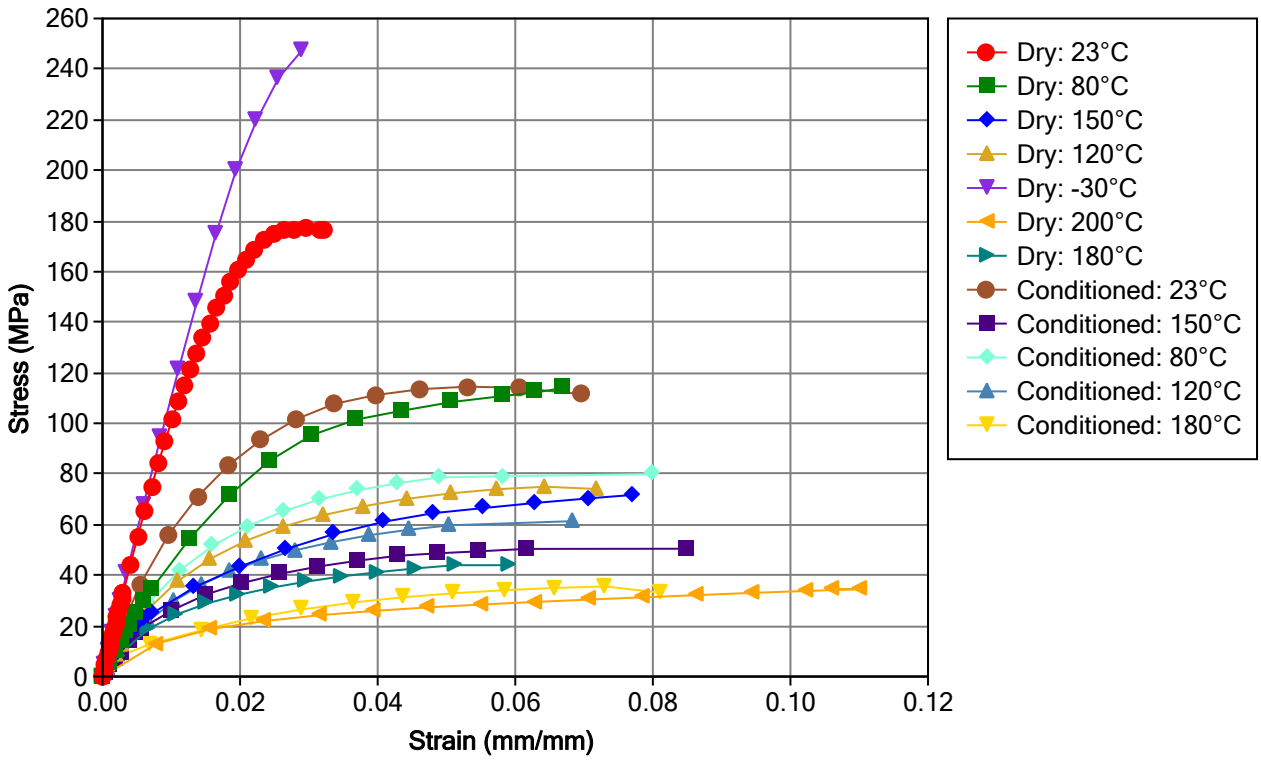
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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)



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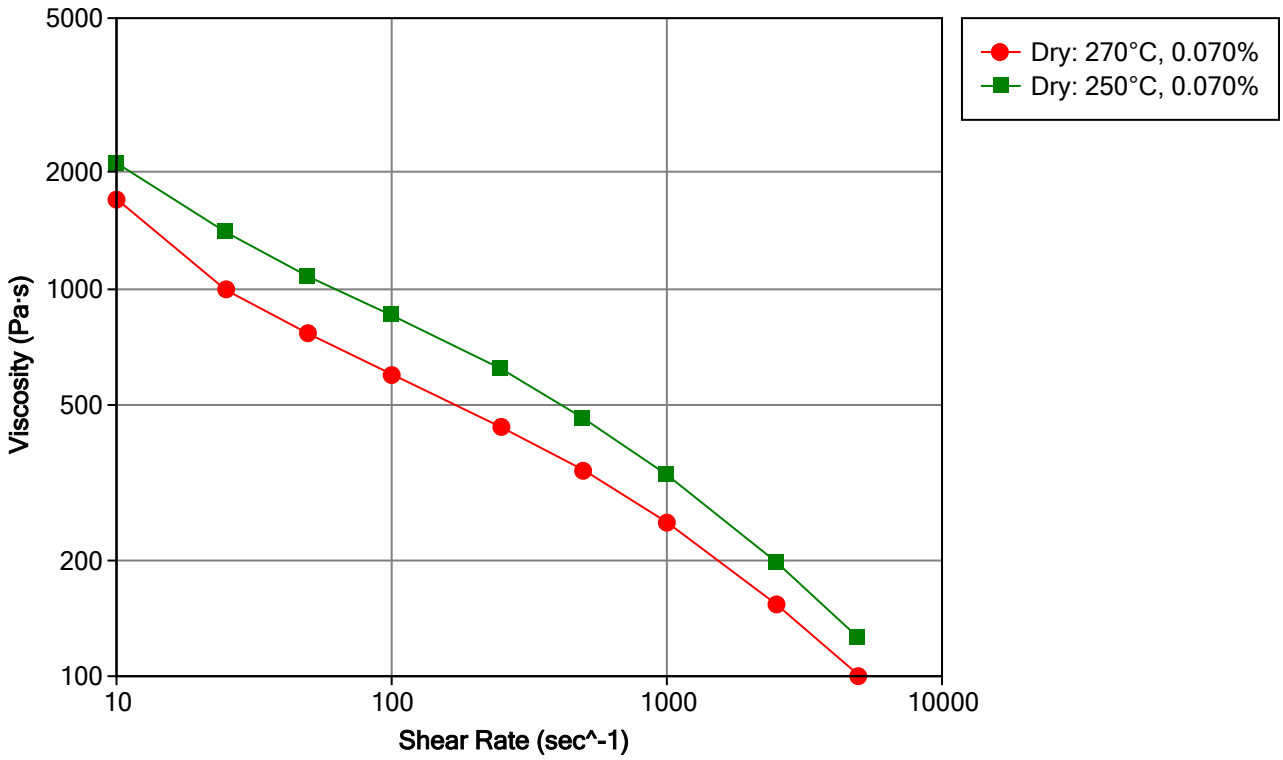
Viscosity vs. Shear Rate (ISO 11403-2)



Notes

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

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