

TECHNYL®

TECHNYL® C 246SI V30 BLACK 31N

TECHNICAL DATA SHEET

Revised: April, 2017

TECHNYL® C 246SI V30 Black is a polyamide 6 reinforced with 30% of glass fiber, with improved impact resistance, for injection moulding. This grade offers high impact strength and good mechanical properties.

GENERAL

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Additive	• Impact Modifier
Key Benefits	• Good Dimensional Stability • Good Flow • High Impact Resistance • Good Surface Finish
Applications	• Consumer and Industrial applications • Motorcycles • Power tools • Seat components
Certification/Compliance	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Colors Available	• Black • Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6-GF30

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Conditioned	Unit	Test Method
Water Absorption				ISO 62
24 hr, 23°C	0.88		%	
Equilibrium, 23°C, 50% RH	2.0		%	
Density	1.32		g/cm ³	ISO 1183/A
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	8600	5000	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	140	90	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	4.0	10	%	ISO 527-2
Flexural Modulus (23°C)	7500	4400	MPa	ISO 178
Flexural Stress (23°C)	230	125	MPa	ISO 178
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	12		kJ/m ²	
23°C	20	30	kJ/m ²	



Mechanical	Dry	Conditioned	Unit	Test Method
Charpy Unnotched Impact Strength				
-30°C	95	100	kJ/m ²	ISO 179/1eU
-30°C	80		kJ/m ²	ISO 179/1fU
23°C	90	110	kJ/m ²	ISO 179/1eU
23°C	80	100	kJ/m ²	ISO 179/1fU

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/Af
1.8 MPa, Unannealed	200		°C	
Melting Temperature	222		°C	ISO 11357-3

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.080	%
Rear Temperature	250 to 270	°C
Middle Temperature	260 to 280	°C
Front Temperature	260 to 290	°C
Mold Temperature	70 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:

- For reinforced polyamides, Solvay recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.
- The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

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, MERCHANTABILITY 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:

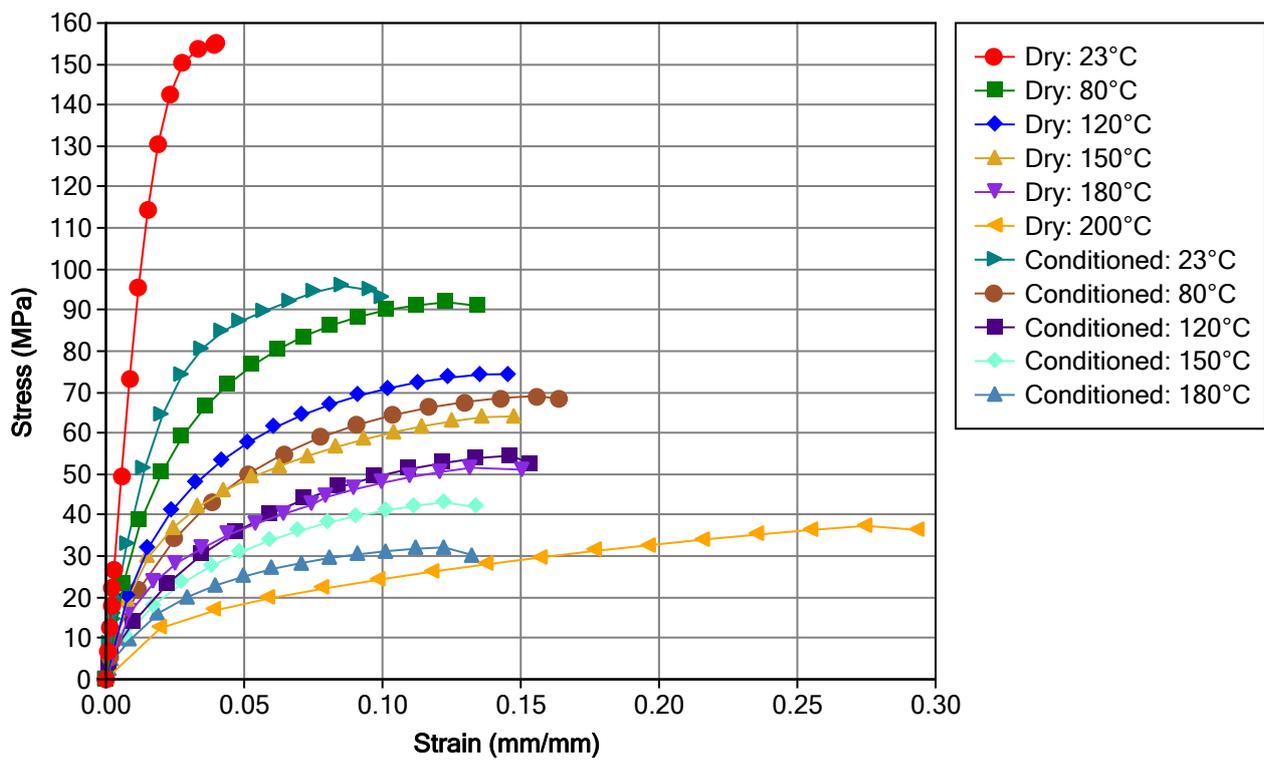
- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

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

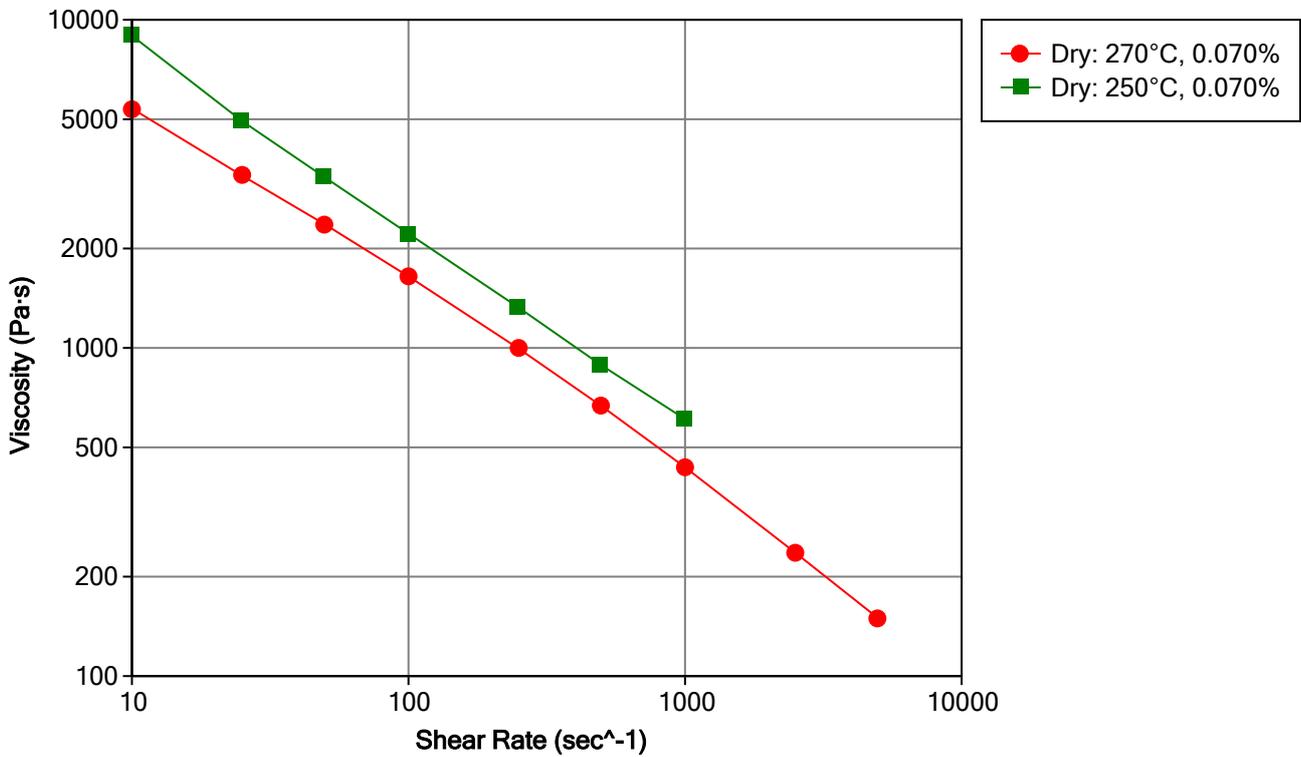


MULTIPOINT DATA

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.

