

# TECHNYL®

## TECHNYL® C 230 NATURAL

TECHNICAL DATA SHEET

Revised: June, 2018

TECHNYL® C 230 Natural is an unreinforced polyamide 6, with improved impact resistance, for injection moulding. This grade offers improved impact strength and higher flexibility. The grade is designed to make technical parts having small or medium size. This product is available in natural color.

### GENERAL

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe
Additive	• Impact Modifier
Key Benefits	• Good Flow • High Impact Resistance • Good Mold Release
Applications	• Fixation systems • Switch, Plug, Control & Sockets
Certification/Compliance	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Colors Available	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA6

### PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	1.5		%	
Flow	1.2		%	
Water Absorption				ISO 62
24 hr, 23°C	1.2		%	
Saturation, 23°C	9.0		%	
Equilibrium, 23°C, 50% RH	3.3		%	
Density	1.14		g/cm <sup>3</sup>	ISO 1183/A
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2600	720	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	65	30	MPa	
Break, 23°C	45	35	MPa	
Tensile Strain				ISO 527-2
Yield, 23°C	7.0	30	%	
Break, 23°C	> 50	> 200	%	
Flexural Modulus (23°C)	2500	800	MPa	ISO 178

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Mechanical	Dry	Conditioned	Unit	Test Method
Flexural Stress (23°C)	100	35.0	MPa	ISO 178
Charpy Notched Impact Strength (23°C)	11	90	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU
Notched Izod Impact Strength (23°C)	9.0	80	kJ/m <sup>2</sup>	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 1.8 MPa, Unannealed	75		°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)		18	kV/mm	IEC 60243-1
Relative Permittivity	3.50	4.00		IEC 60250
Dissipation Factor	0.20	0.12		IEC 60250
Comparative Tracking Index (Solution A)	600	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.6 mm)	HB			UL 94

## 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 80	°C

### Injection Notes

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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 unfilled polyamides, Solvay recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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
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### DISCLAIMER

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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

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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

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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

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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:

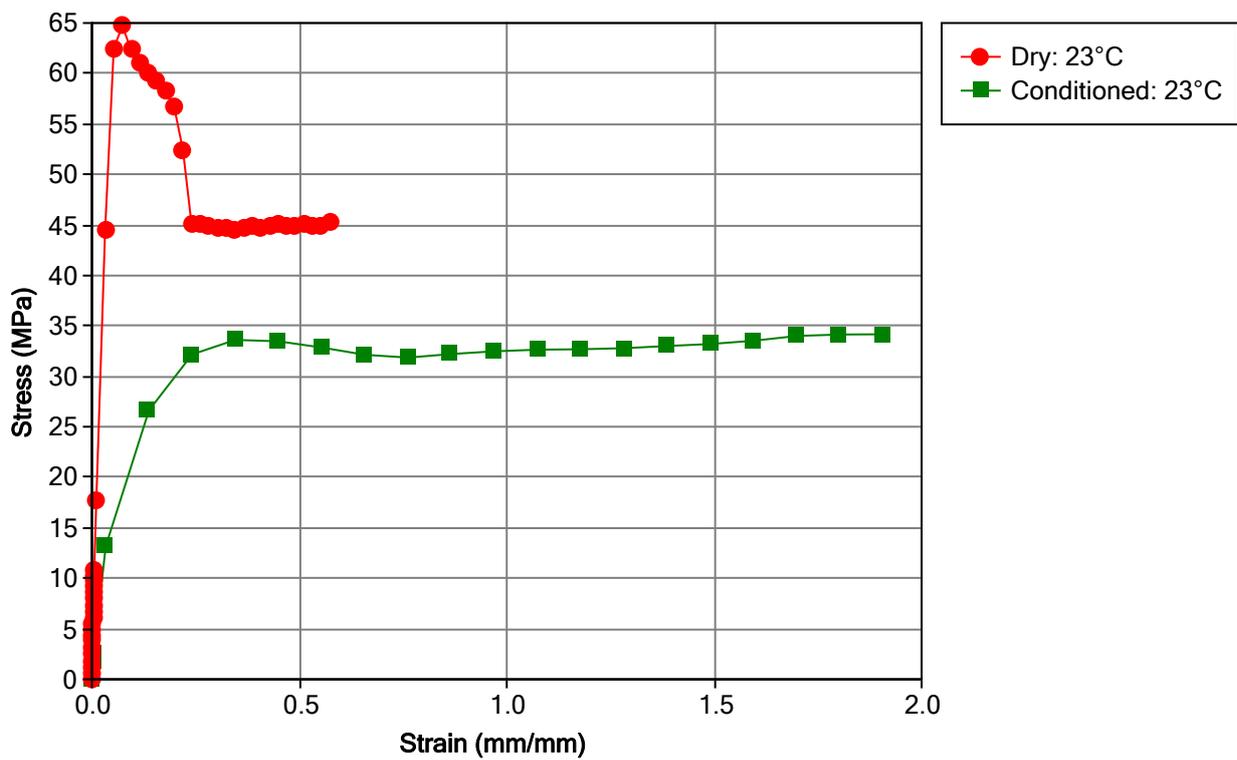
- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

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.

