

# TECHNYL®

## TECHNYL® B 238 BLACK 21 N

TECHNICAL DATA SHEET

Revised: February, 2019

TECHNYL® B 238 Black 21N is an unfilled copolyamide 6.6/6, impact modified, for injection moulding. This product offers an excellent notched impact resistance, even at low temperature.

### GENERAL

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe
Additive	• Heat Stabilizer • Impact Modifier
Key Benefits	• Heat Stabilized (Inorganic) • Good Impact Resistance • Good Mold Release • Good Surface Finish
Applications	• Clips & Fasteners • Connectors • Fixation systems
Certification/Compliance	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• IMDS ID 20519364/1
Colors Available	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA66/6

### PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	2.1		%	
Flow	1.6		%	
Water Absorption (24 hr, 23°C)	1.4		%	ISO 62
Density	1.09		g/cm <sup>3</sup>	ISO 1183/A
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2300	900	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	60	40	MPa	
Break, 23°C	50	40	MPa	
Tensile Strain				ISO 527-2
Yield, 23°C	5.0	12	%	
Break, 23°C	50		%	
Flexural Modulus (23°C)	2000	700	MPa	ISO 178
Flexural Stress (23°C)	80.0	27.0	MPa	ISO 178



Mechanical	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.0	30	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break			ISO 179/1eU
Notched Izod Impact Strength (23°C)	7.0	18	kJ/m <sup>2</sup>	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 1.8 MPa, Unannealed	62		°C	ISO 75-2/Af
Melting Temperature	242		°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	5.0E+15	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+16	1.0E+14	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	32	30	kV/mm	IEC 60243-1
Dissipation Factor	0.020	0.070		IEC 60250
Comparative Tracking Index				IEC 60112
Solution A	500	500	V	
Solution B	475		V	
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	250 to 260	°C
Middle Temperature	255 to 265	°C
Front Temperature	265 to 275	°C
Mold Temperature	60 to 80	°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.
- 

### 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>

#### Notes

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

