

TECHNYL[®] A 218G V33 BLACK 41N

TECHNICAL DATA SHEET

Revised: January, 2018

TECHNYL[®] A 218G V33 Black 41N is a polyamide 66, reinforced with 33% of glass fiber, for injection moulding. This grade has been specially designed to improve its resistance to automotive cooling liquids, increasing lifetime of parts in permanent contact with such liquids.

GENERAL

Material Status	• Commercial: Active - Private	
Availability	• North America	
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight	
Additive	• Heat Stabilizer	
Key Benefits	• Good Flow • Glycol Resistance • Heat Aging Resistance	• Hydrolysis Resistant • Good Mold Release • Superior Surface Finish
Applications	• Automotive applications • Coolant pipes	• Cooling circuit component • General purpose
RoHS Compliance	• RoHS Compliant	
Colors Available	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA66-G33	

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry Unit	Test Method
Water Absorption		ISO 62
24 hr, 23°C	0.78 %	
Saturation, 23°C	5.3 %	
Equilibrium, 23°C, 50% RH	1.7 %	
Density	1.39 g/cm ³	ISO 1183/A
Mechanical	Dry Unit	Test Method
Tensile Modulus (23°C)	11300 MPa	ISO 527-2/1A
Tensile Strength		
Break, 23°C	190 MPa	ASTM D638
Break, 23°C	185 MPa	ISO 527-2/1A
Tensile Elongation		
Break, 23°C	3.4 %	ASTM D638
Break, 23°C	3.2 %	ISO 527-2

Mechanical	Dry Unit	Test Method
Flexural Modulus		
23°C	8700 MPa	ASTM D790
23°C	9900 MPa	ISO 178
Flexural Stress (23°C)	264 MPa	ISO 178
Charpy Notched Impact Strength (23°C)	12 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	85 kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	10 kJ/m ²	ISO 180

Thermal	Dry Unit	Test Method
Heat Deflection Temperature		ISO 75-2/Af
1.8 MPa, Unannealed	250 °C	
Melting Temperature	262 °C	ISO 11357-3

PROCESSING

Injection	Dry Unit
Drying Temperature	80 °C
Suggested Max Moisture	0.15 %
Rear Temperature	270 to 280 °C
Middle Temperature	275 to 285 °C
Front Temperature	280 to 290 °C
Mold Temperature	70 to 100 °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.

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

MULTIPOINT DATA

Isothermal Stress vs. Strain (ISO 11403-1)

