TECHNYL® A 218 V35 BLACK 34NG

TECHNICAL DATA SHEET

Revised: September, 2018

TECHNYL® A 218 V35 Black 34 NG is a polyamide 66, reinforced with 35% of glass fiber, heat stabilized, 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 a liquids.

GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight	
Additive	• Heat Stabilizer	
Key Benefits	• Good Flow • Glycol Resistance • Heat Aging Resistance	• Heat Stabilized (Inorganic) • Hydrolysis Resistant • Good Mold Release
Applications	• Automotive applications • Coolant pipes • Cooling connectors • Expansion tanks	• Oil filter modules • Radiator end tanks • Thermostat housings • Water pumps
Certification/Compliance	• EC 1907/2006 (REACH)	• UL QMFZ2
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• GM GMW16270P-PA66-GF35 • GM GMW3038P-PA66-GF35H • GM GMW3038P-PA66-GF35J • IMDS ID 4654426	• IMDS ID 4654426/3 • PSA Peugeot-Citroën SPA X62 4112 Color: 34NG Black • RENAULT PMR 2017 AS 26
Colors Available	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA66-GF35	

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	1.1		%	
Flow	0.35		%	
Water Absorption				ISO 62
24 hr, 23°C	0.75		%	
Equilibrium, 23°C, 50% RH	1.6		%	
Density	1.41		g/cm³	ISO 1183/A

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Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	12000	8700	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	210	150	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.0	6.5	%	ISO 527-2
Charpy Notched Impact Strength (23°C)	14	19	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	95	100	kJ/m²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	13	18	kJ/m²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/Af
1.8 MPa, Unannealed	255		°C	
Melting Temperature	262		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	6.0E+14	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+13	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	34	29	kV/mm	IEC 60243-1
Dissipation Factor	0.010	0.11		IEC 60250
Comparative Tracking Index (Solution A)	400		V	IEC 60112

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.8 mm	HB			
1.6 mm	HB			
3.2 mm	HB			
Oxygen Index	23		%	ISO 4589-2

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
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

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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.

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

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MULTIPOINT DATA

Isothermal Stress vs. Strain (ISO 11403-1)