

# TECHNYL<sup>®</sup> BLUE

## TECHNYL<sup>®</sup> A 218 V30 BLACK 34NG

TECHNICAL DATA SHEET

Revised: August, 2017

TECHNYL<sup>®</sup> A 218 V30 Black 34 NG is a polyamide 66, reinforced with 30% 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 liquids.

### GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 30% 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) • EN 45545	• UL QMFZ2
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• CHRYSLER MS-DB-41 CPN4018 Color: Black • FORD WSK-M4D752-A • GM GMW16270P-PA66-GF30 • GM GMW3038P-PA66-GF30H • GM GMW3038P-PA66-GF30H Color: Black	• GM GMW3038P-PA66-GF30J • GM GMW3038P-PA66-GF30J Color: Black • IMDS ID 29006804 • RENAULT PMR 2017 AS 26
Colors Available	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA66-GF30	

### 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	0.40	%	
Water Absorption			ISO 62
23°C, 24 hr	0.80	%	
Equilibrium, 23°C, 50% RH	1.7	%	

Solvay Engineering Plastics

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Page: 1 of 6



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<b>Physical</b>	<b>Dry</b>	<b>Conditioned</b>	<b>Unit</b>	<b>Test Method</b>
Density	1.36		g/cm <sup>3</sup>	ISO 1183/A
<b>Mechanical</b>				
Tensile Modulus (23°C)	10000	7500	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	190	135	MPa	ISO 527-2/1A
Tensile Elongation				
Break, 23°C	3.0		%	ASTM D638
Break, 23°C	3.0	7.0	%	ISO 527-2
Flexural Modulus				
23°C	9000		MPa	ASTM D790
23°C	9000	6400	MPa	ISO 178
Flexural Strength				
23°C	290		MPa	ASTM D790
23°C	280	185	MPa	ISO 178
Charpy Notched Impact Strength (23°C)	11	15	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength				
23°C	75	88	kJ/m <sup>2</sup>	ISO 179/1eU
23°C	70		kJ/m <sup>2</sup>	ISO 179/1fU
Notched Izod Impact				
23°C	120		J/m	ASTM D256
23°C	10	18	kJ/m <sup>2</sup>	ISO 180
<b>Thermal</b>				
Deflection Temperature Under Load				
1.8 MPa, Unannealed	255		°C	ASTM D648
1.8 MPa, Unannealed	250		°C	ISO 75-2/1Af
Melting Temperature	262		°C	ISO 11357-3
<b>Electrical</b>				
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
Relative Permittivity	3.70	4.00		IEC 60250
Dissipation Factor	0.010	0.11		IEC 60250
Comparative Tracking Index				IEC 60112
Solution A	600	600	V	
Solution B	500		V	
<b>Flammability</b>				
Flame Rating				UL 94
0.8 mm	HB			
1.6 mm	HB			
3.2 mm	HB			

Flammability	Dry	Conditioned Unit	Test Method
Glow Wire Flammability Index (1.6 mm)	650	°C	IEC 60695-2-12
Oxygen Index	23	%	ISO 4589-2

## 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, MERCHANDABILITY 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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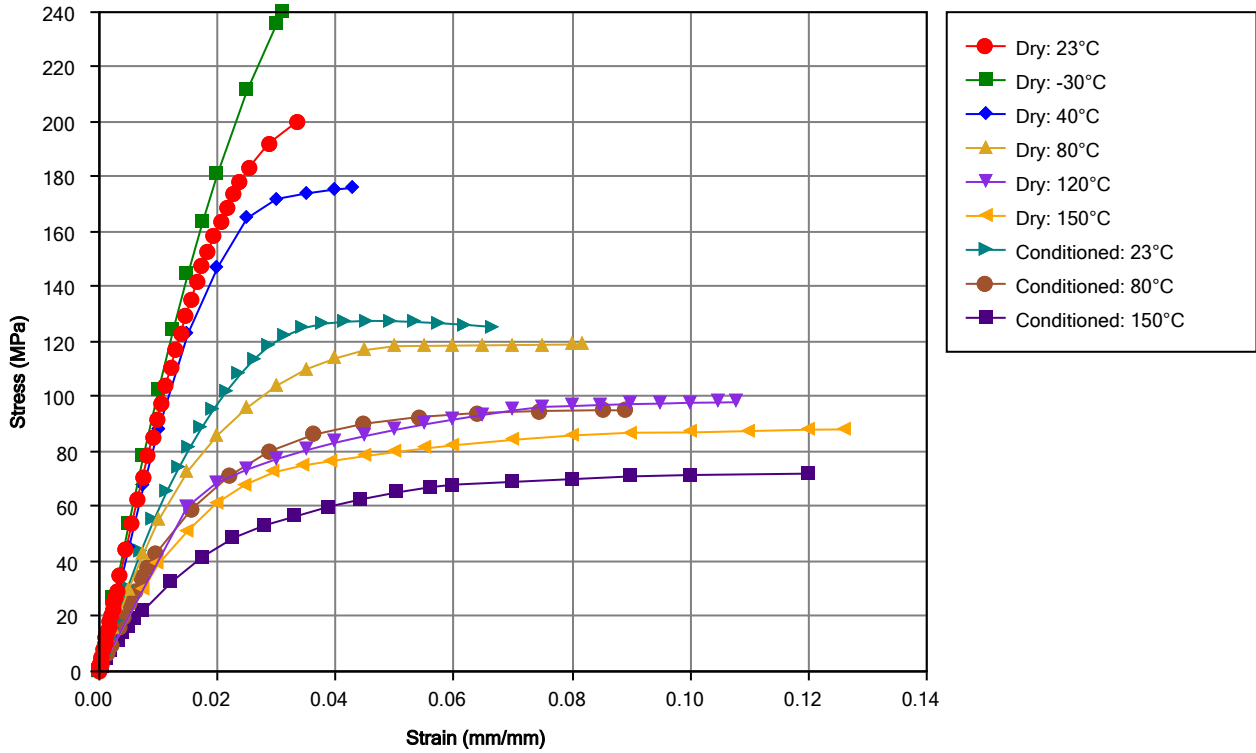
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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

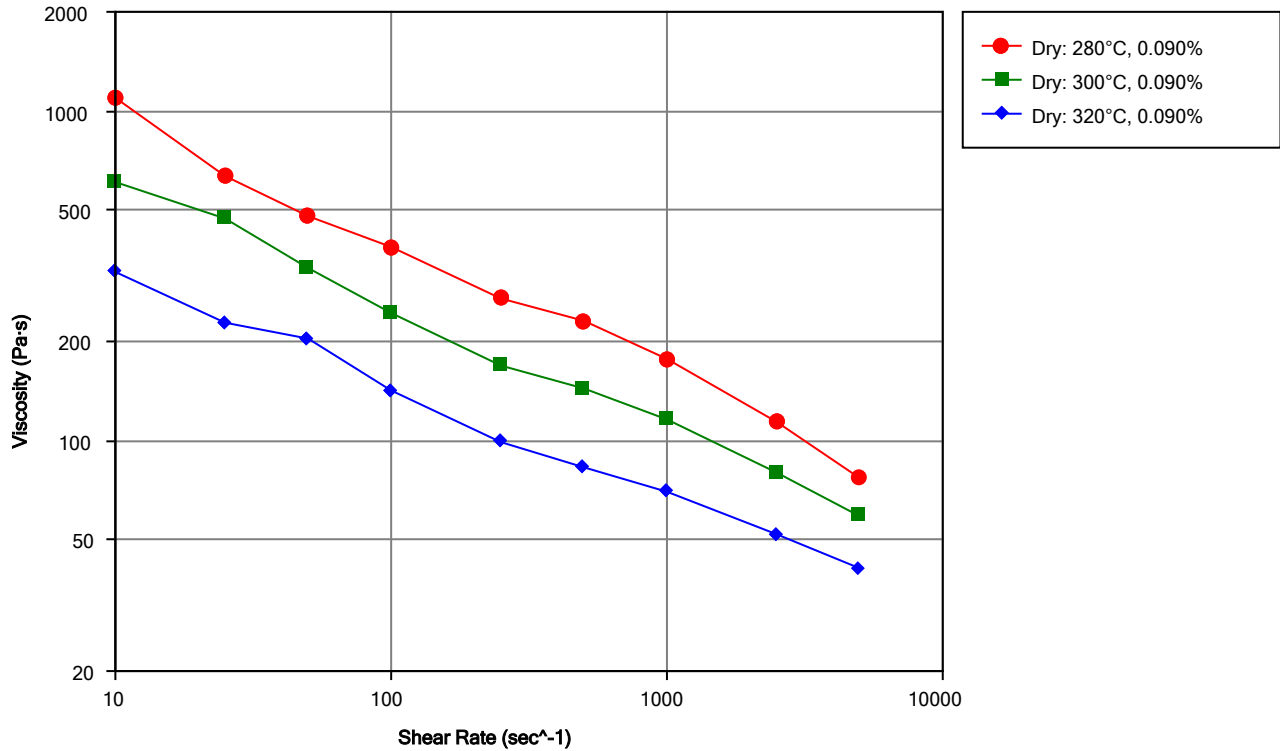
You can find more information on Solvay Product range on our internet product finder at the following address:  
<http://www.technyl.com>

## MULTIPOINT DATA

### Isothermal Stress vs. Strain (ISO 11403-1)



**Viscosity vs. Shear Rate (ISO 11403-2)**



**Notes**

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