



## TECHNYL A 218 V50 BLACK 21 N

### Description

TECHNYL® A 218 V50 Black 21N is a polyamide 66, reinforced with 50% of glass fibre, heat stabilized, for injection moulding. This product is available in black color.

### Key Properties

Mechanical performance  
Heat stabilised

### Benefits

The product offers an excellent combination between thermal and mechanical properties.

### Applications

It is used in a wide variety of industries.

## Properties

Typical values of properties are for natural grades

	Standards	Unit	Values	
			d.a.m.	Cond.
<b>Physical</b>				
Water absorption(24h at 23°C)	ISO 62	%	0,60	
Density	ISO 1183/A	g/cm3	1,57	
Molding shrinkage Parallel	RHODIA	%	0,44	
Molding shrinkage normal or perpendicular	RHODIA	%	0,80	
Molding Shrinkage Isotropy	RHODIA		0,55	
<b>Mechanical</b>				
Tensile Modulus	ISO 527 Type 1A	MPa	16200	12500
Tensile strength at break	ISO 527 Type 1A	MPa	240	175
	ASTM D-638	MPa	220	
Elongation at break	ISO 527 Type 1A	%	2	3
Flexural modulus	ISO 178	MPa	13500	10000
	ASTM D-790	MPa	13800	
Flexural maximum stress	ASTM D-790	MPa	350	
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m2	16	18
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m2	95	97
Izod notched impact strength (23 °C)	ISO 180/1A	kJ/m2	14,5	17
	ASTM D256	J/m	180	
<b>Flammability</b>				
Flammability (Thickness: 0,8 mm)	ISO 1210 / UL94			HB
Flammability (Thickness: 1,6 mm)	ISO 1210 / UL94			HB
Flammability (Thickness: 3,2 mm)	ISO 1210 / UL94			HB
Glow Wire Flammability Index (Thickness: 0,8 mm)	ISO 60695-2-12	°C	650	
Glow Wire Flammability Index (Thickness: 1,6 mm)	ISO 60695-2-12	°C	650	
Glow Wire Flammability Index (Thickness: 3,2 mm)	ISO 60695-2-12	°C	700	
Limit Oxygen Index	ISO 4589		23	
<b>Thermal</b>				
Melting Temperature	ISO 11357	°C	263	
Heat deflection temperature (1,8 MPa)	ISO 75/af	°C	255	
Heat deflection temperature (1,82 MPa)	ASTM D-648	°C	255	
Coef of Linear thermal expansion parallel (23°C to 85°C)	ISO 11359	E-5/°C	1,5	

	Standards	Unit	Values	
			d.a.m.	Cond.
<b>Electrical</b>				
Comparative tracking index (Sol A)	IEC 60112	V	600	600
Dielectric strength	IEC 60243	kV/mm	35	30
Dissipation factor	IEC 60250		0,010	0,110
Relative permittivity	IEC 60250		3,70	4
Surface resistivity	IEC 60093	Ohm	6E 14	1E 12
Volume resistivity	IEC 60093	Ohm/cm	1E 15	1E 13

**Specific**

Identification code

PA66-GF50

d.a.m. = dry as moulded

Cond = conditioned

**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 substitute 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 Rhodia is at their disposal to supply any additional information.

## Processing Guide

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.

Recommended Maximum water content: 0,2 %

Drying conditions: 80 °C

### Recommended moulding conditions

Barrel Temperatures:

- feed zone	265 - 275 °C
- compression zone	270 - 280 °C
- mixing zone	280 - 290 °C
Mould temperatures:	80 - 110 °C

**Steel advice for tools** For glass fibers reinforced polyamide, Rhodia recommends the use of steel with a high content of Carbon and purified for polishing to avoid or limit the abrasion. For example: Z38CDV5W or Z160CDV12.

## 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

Grades produced or imported in Europe comply with directive 453/2010/EC, which amends REACH directive 1907/2006/EC

This grade complies with RoHS directive 2002/95/EC

Unless specified, this grade is not suitable for food contact, medical devices or toy applications

## 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:

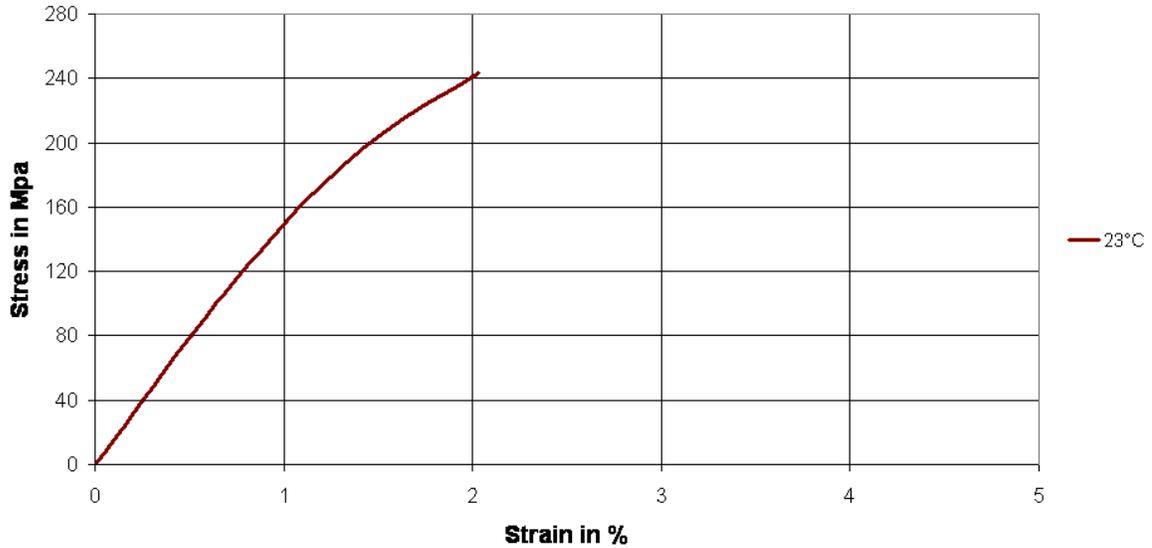
- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

You can find more information on Rhodia Product range on our internet product finder at the following address:

[http://www.rhodia.com/en/markets\\_and\\_products/product\\_finder](http://www.rhodia.com/en/markets_and_products/product_finder)

**Stress-strain**

**Stress-Strain (dry)**  
**Technyl® A 218 V50**



**Viscosity-shear rate**

**Viscosity-shear rate**  
**Technyl® A 218 V50**

