



TECHNYL A 217 BLACK 1 N

Description

TECHNYL ® A 217 Black 1 N is an unreinforced polyamide 66, heat stabilized, standard viscosity, for injection moulding. It is available in black color.

Key Properties

Chemical resistance
Excellent thermal resistance
Metallization

Benefits

This product offers all the primary properties of unreinforced polyamide 66. In addition it has improved resistance to high temperature and it can be used for components which have to withstand mid term temperature stresses.

This product can also be vacuum metalized with very good surface quality and adhesion of the aluminum surface. In case of fire its smoke rate is very low. It is also complying with NFF 16-101 rating I3 F2.

Applications

It perfectly suits for the production of the head lamp bezels in automotive industry and connectors in electrical industry.

Properties

Typical values of properties are for black grades

	Standards	Unit	Values	
			d.a.m.	Cond.
Physical				
Water absorption(24h at 23°C)	ISO 62	%	1,30	
Water absorption(30 min at 100°C)	ISO 62	%	1,50	
Density	ISO 1183/A	g/cm3	1,14	
Molding shrinkage Parallel	RHODIA	%	1,90	
Molding shrinkage normal or perpendicular	RHODIA	%	1,90	
Molding Shrinkage Isotropy	RHODIA		1	
Mechanical				
Tensile Modulus	ISO 527 Type 1A	MPa	3300	1500
Tensile strength at yield	ISO 527 Type 1A	MPa	88	60
	ASTM D-638	MPa	85	
Tensile strength at break	ISO 527 Type 1A	MPa	65	40
Elongation at yield	ISO 527 Type 1A	%	4,50	10
Elongation at break	ISO 527 Type 1A	%	20	200
	ASTM D-638	%	30	
Flexural modulus	ISO 178	MPa	3100	1450
	ASTM D-790	MPa	3500	
Flexural maximum stress	ISO 178	MPa	130	80
	ASTM D-790	MPa	125	
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m2	4,5	11
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m2	NB	NB
Izod notched impact strength (23 °C)	ISO 180/1A	kJ/m2	4	10
	ASTM D256	J/m	80	
Izod unnotched impact strength	ISO 180/1U	kJ/m2	NB	NB
Flammability				
Flammability (Thickness: 1,6 mm)	ISO 1210 / UL94		V2	
Flammability (Thickness: 3,2 mm)	ISO 1210 / UL94		V2	
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 Ignition Temperature (Thickness: 1,6 mm)	ISO 60695-2-13	°C	650	
Limit Oxygen Index	ISO 4589		26	
Fire and Smoke index	NF F 16 101		I3 / F2	

	Standards	Unit	Values	
			d.a.m.	Cond.
Thermal				
Melting Temperature	ISO 11357	°C	263	
Heat deflection temperature (1,8 MPa)	ISO 75/Af	°C	75	
Heat deflection temperature (1,82 MPa)	ASTM D-648	°C	75	
Heat deflection temperature (0,64 MPa)	ASTM D-648	°C	220	
Coef of Linear thermal expansion parallel (23°C to 85°C)	ISO 11359	E-5/°C	7	
	ASTM D-696	E-5/°C	7	
Electrical				
Comparative tracking index (Sol A)	IEC 60112	V	600	600
Comparative tracking index (Sol B)	IEC 60112	V	450	
Dielectric strength	IEC 60243	kV/mm	25	22
Dissipation factor	IEC 60250		0,030	0,080
Relative permittivity	IEC 60250		2,90	3,20
Surface resistivity	IEC 60093	Ohm	1E 15	1E 13
Volume resistivity	IEC 60093	Ohm/cm	1E 15	1E 14
Specific				
Identification code				PA66

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: 60 - 80 °C

Steel advice for tools For unfilled polyamide, Rhodia recommends the use of high alloy steel with a weak chromium content. For example: 35NC6 or 35CD4.

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:

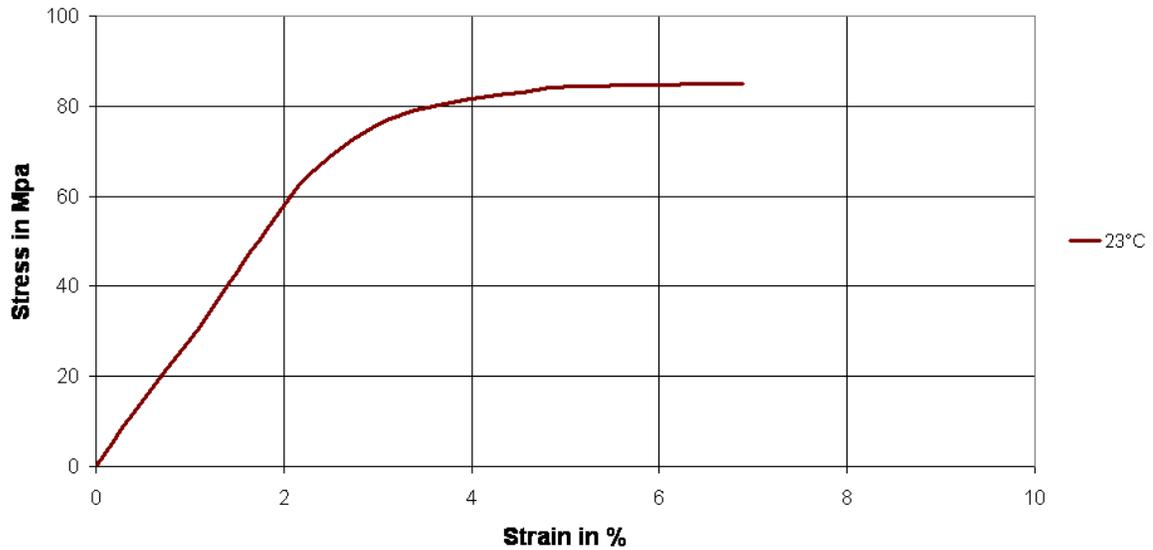
- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

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

Stress-strain

**Stress-Strain (dry)
Technyl® A 217**



Viscosity-shear rate

**Viscosity-shear rate
Technyl® A 217**

