Engineering Plastics'
TECHNYL®

Product Data Sheet

16.11.2011

TECHNYL A 218 NATURAL

Description

TECHNYL ® A 218 Natural is an unreinforced polyamide 66, standard viscosity, heat stabilized for injection moulding.It is available in natural color.

Key Properties

Chemical resistance
Excellent thermal resistance

Benefits

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

Applications

It is used in a wide variety of industries.

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Rhodia

Properties

Typical values of properties are for natural grades

	Standards	Unit	Values d.a.m.	Values Cond.
Physical				
Water absorption(24h at 23°C)	ISO 62	%	1,30	
	ISO 62	%	1,20	
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	3000	1500
Tensile strength at yield	ISO 527 Type 1A	MPa	90	60
	ASTM D-638	MPa	85	
Tensile strength at break	ISO 527 Type 1A	MPa	55	40
Elongation at yield	ISO 527 Type 1A	%	4	10
Elongation at break	ISO 527 Type 1A	%	50	200
	ASTM D-638	%	30	
Flexural modulus	ISO 178	MPa	3000	1300
	ASTM D-790	MPa	3300	
Flexural maximum stress	ISO 178	MPa	120	70
	ASTM D-790	MPa	125	
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m2	4,5	10
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			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: 1,6 mm)	ISO 60695-2-12	°C	650	
Limit Oxygen Index	ISO 4589		26	
Thermal				
Melting Temperature	ISO 11357	°C	263	
Heat deflection temperature (1,8 MPa)	ISO 75/Af	°C	82	
Heat deflection temperature (0,45 MPa)	ISO 75/Bf	°C	200	
	ASTM D-648	°C	220	
Coef of Linear thermal expansion parallel (23°C to 85°C)	ISO 11359	E-5/°C	7	

	Standards	Unit	Values	
			d.a.m.	Cond.
Electrical				
Comparative tracking index (Sol A)	IEC 60112	V	600	600
Comparative tracking index (Sol B)	IEC 60112	V	350	
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

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

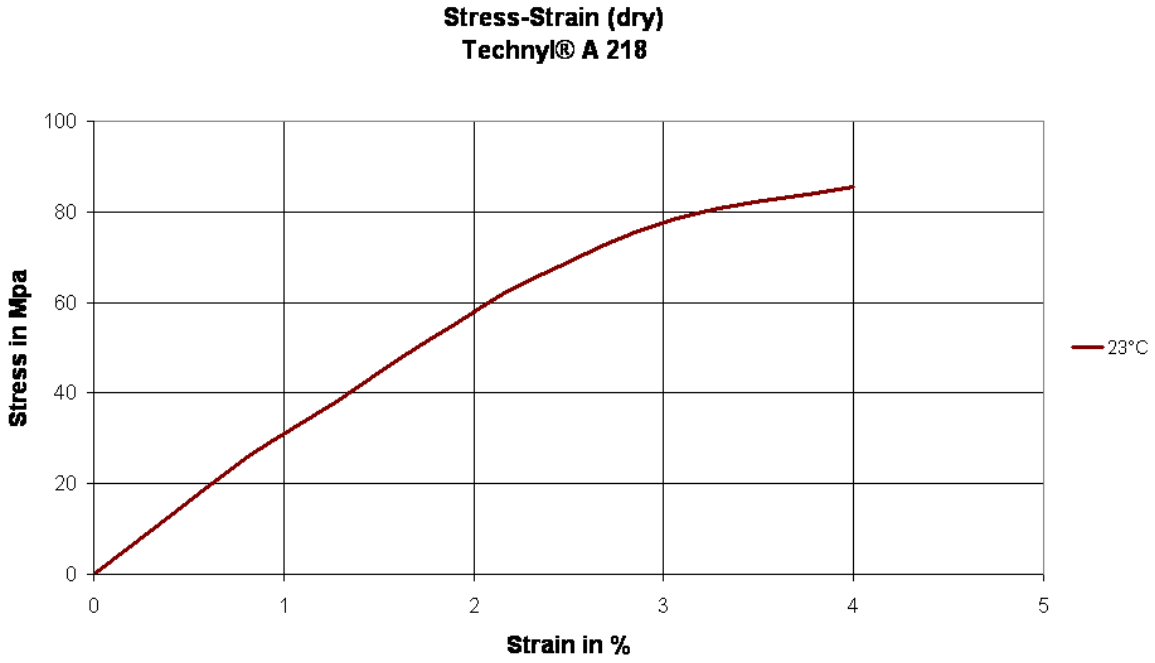
Grades produced or imported in Europe comply with directive 453/2010/EC, which amends REACH directive 1907/2006/EC
This grade complies with RoHS directive 2002/95/EC
Unless specified, this grade is not suitable for food contact, medical devices or toy applications

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



Viscosity-shear rate