Engineering Plastics'
TECHNYL®

Product Data Sheet

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TECHNYL A 216 S40 NATURAL

Description

TECHNYL A 216 S40 NATURAL is a Polyamide 66, reinforced with 40% of glass spheres, for injection moulding.
This product is available in natural color.

Key Properties

Isotropic shrinkage
Excellent combination between thermal & mechanical properties

Benefits

This grade offers an excellent combination between thermal and mechanical properties.

Applications

It is used in all sectors of industry.
It is recommended for mechanical components which require a very good surface finish with low warpage, and good compression strength.

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	%	0,70	
	ISO 62	%		
Density	ISO 1183/A	g/cm3	1,47	
	ISO 1183/A	g/cm3	1,17	
Molding shrinkage Parallel	RHODIA	%	1,40	
Molding shrinkage normal or perpendicular	RHODIA	%	1,40	
Molding Shrinkage Isotropy	RHODIA		1	
Mechanical				
Tensile Modulus	ISO 527 Type 1A	MPa	5000	3000
	ISO 527 Type 1A	MPa	3600	1300
Tensile strength at break	ISO 527 Type 1A	MPa	85	50
	ISO 527 Type 1A	MPa	77	45
Elongation at yield	ISO 527 Type 1A	%	4	20
Elongation at break	ISO 527 Type 1A	%	15	
	ISO 527 Type 1A	%	2,90	
Flexural modulus	ISO 178	MPa	4700	2450
Flexural maximum stress	ISO 178	MPa	150	75
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m2	4	7,5
	ISO 179/1eA	kJ/m2	4,2	14,6
Charpy unnotched impact strength (23 °C)	ISO 179/1eU	kJ/m2	NB	
	ISO 179/1eU	kJ/m2	19	
Izod notched impact strength (23 °C)	ISO 180/1A	kJ/m2	3	7
	ISO 180/1A	kJ/m2	4,3	11,5
Flammability				
Flammability (Thickness: 1,6 mm)	ISO 1210 / UL94		V2	
Glow Wire Flammability Index (Thickness: 1,6 mm)	ISO 60695-2-12	°C	850	
Thermal				
Melting Temperature	ISO 11357	°C	263	
	ISO 11357	°C	260	
Heat deflection temperature (1,8 MPa)	ISO 75/Af	°C	100	
	ISO 75/Af	°C	70	
Coef of Linear thermal expansion normal or perpendicular (23°C to 85°C)		E-5/°C	6	

	Standards	Unit	Values	
			d.a.m.	Cond.
Electrical				
Comparative tracking index (Sol A)	IEC 60112	V	600	500
Comparative tracking index (Sol B)	IEC 60112	V	500	
Dielectric strength	IEC 60243	kV/mm	28	26
Dissipation factor	IEC 60250		0,020	0,110
Surface resistivity	IEC 60093	Ohm	5E 14	5E 11
Volume resistivity	IEC 60093	Ohm/cm	5E 14	1E 13
Specific				
Identification code			PA66-GB40	

d.a.m. = dry as moulded
Cond = conditioned

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 270 - 280 °C
- compression zone 275 - 285 °C
- mixing zone 280 - 290 °C

Mould temperatures: 70 - 100 °C

Disclaimer

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 Solvay Product range by on Technyl.com and the link to the product finder and brochures at the following address:
http://www.technyl.com/en/download/brochures/index.html