



TECHNYL A 218 S40 BLACK 21 N

Description

TECHNYL® A 218 S40 BLACK 21N is a Polyamide PA66, reinforced with 40% of glass spheres, heat stabilised, for injection moulding. This product is available in black.

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 recommended for mechanical components which require a very good surface finish with low warpage, and good compression strength. (bearing housings).

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 | % | 0,70 | |
| Density | ISO 1183/A | g/cm3 | 1,47 | |
| 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 |
| Tensile strength at break | ISO 527 Type 1A | MPa | 85 | 50 |
| Elongation at yield | ISO 527 Type 1A | % | 4 | 20 |
| Elongation at break | ISO 527 Type 1A | % | 15 | |
| 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 |
| Charpy unnotched impact strength (23 °C) | ISO 179/1eU | kJ/m2 | NB | |
| Izod notched impact strength (23 °C) | ISO 180/1A | kJ/m2 | 3 | 7 |
| Flammability | | | | |
| Flammability (Thickness: 1,6 mm) | ISO 1210 / UL94 | | HB | |
| 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 | 100 | |
| Coef of Linear thermal expansion normal or perpendicular (23°C to 85°C) | | E-5/°C | 6 | |
| Electrical | | | | |
| Comparative tracking index (Sol A) | IEC 60112 | V | 450 | 400 |
| Dielectric strength | IEC 60243 | kV/mm | 30 | 26 |
| Dissipation factor | IEC 60250 | | 0,010 | 0,110 |
| Relative permittivity | IEC 60250 | | 4 | 5 |
| Surface resistivity | IEC 60093 | Ohm | 5E 14 | 5E 11 |
| Volume resistivity | IEC 60093 | Ohm/cm | 1E 15 | 1E 13 |
| Specific | | | | |
| Identification code | | | PA66-GB40 | |

Standards**Unit****Values**

d.a.m.

Cond.

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

Steel advice for tools For reinforced polyamide (glass fibre, glass sphere, mineral fibre...), Solvay 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.

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

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>