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TECHNYL® PURE
Electrically neutral

DOMO
caring is our formula

TECHNICAL DATA SHEET

# TECHNYL PURE D 219E1CR V33 BK

**(Previously TECHNYL EXTEN D 219E1CR V33 BLACK)**

TECHNYL PURE D 219E1CR V33 BK is a polyamide PA610/66, reinforced with 33% of glass fibre, organic heat stabilized for injection moulding. This grade offers a clean formula free of additives containing halogens and other substances that can migrate and generate corrosion issues. Electrofriendly heat stabilized grade. Suitable for laser printing. < 50ppm halogen content, based on internal elution analysis. Thanks to the innovative formula it offers lower moisture absorption, improved electrical insulation, higher dimensional stability and good heat stability compared to PA66 compounds. Exceptional hydrolysis resistance.

## General

| | | |
|---|---|---|
| Feature | Lasermarkable<br>Contains renewable content<br>Electro-friendly<br>Excellent surface finish | Chemical resistant<br>Electrical corrosion resistant<br>Excellent hydrolysis resistant<br>Organic heat stabilized |
| Polymer type | (PA610 + PA66) blend | |
| Processing technology | Injection molding | |
| Certification | RoHS | EC 1907/2006 (REACH) |
| Applications | Automotive Applications | fuel cell / H2 system |
| Colors available | Black | |
| Forms | Pellets | |

## Product identification

| | |
|---|---|
| ISO 1043 abbreviation | PA610+PA66-GF33 |

## Physical properties

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| Density | | ISO 1183 | g/cm³ | 1.35 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.3 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 1 |

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| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Mechanical properties** | | | | **dam / cond.*** |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 11300 / 8400 |
| Stress at break | | ISO 527-1/-2 | MPa | 200 / 140 |
| Strain at break | | ISO 527-1/-2 | % | 2.9 / 5 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 9870 / - |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 234 / - |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m² | 85 / 85 |
| Charpy impact strength, -30°C | -30°C | ISO 179/1eU | kJ/m² | 80 / - |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 14 / 16 |
| Charpy notched impact strength, -30°C | -30°C | ISO 179/1eA | kJ/m² | 10 / - |
| **Thermal properties** | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 260 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 225 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 216 |
| **Electrical properties** | | | | |
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1E+013 |
| Comparative tracking index | Solution A | IEC 60112 | V | 675 |
| CTI performance level category | | Sol A | | PLC 0 |
| Dielectric strength | 1 mm | IEC 60243-1 | kV/mm | 22 |
| **Burning behaviour** | | | | |
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | HB |

**: conditioned according to ISO 1110*

| **Processing conditions** | |
|---|---|
| Drying temperature/time | 80 °C |
| Suggested max moisture | 0.15 % |
| Rear temperature | 265 - 275 °C |
| Middle temperature | 270 - 280 °C |
| Front temperature | 275 - 280 °C |
| Recommended mould temperature | 70 - 100 °C |

## Injection notes

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, dew point minimum -20°C. Recommended time 2-4h.

## Injection advice

For reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.

## Disclaimer

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufactures in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.