TECHNYL® 4EARTH®
Sustainable polyamide

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TECHNICAL DATA SHEET

# TECHNYL 4EARTH C5E 236 V30 BK

**(Previously ECONAMID PLUS 6G30 500 BK)**

Polyamide 6, 30% glass fiber reinforced, improved impact resistance, for injection moulding, black

## General

| | |
|---|---|
| Feature | Improved impact resistance |
| Polymer type | PA6 (Polyamide 6) |
| Processing technology | Injection molding |
| Certification | RoHS |

## Product identification

| | |
|---|---|
| ISO 1043 abbreviation | PA6-I-GF30 |
| ISO 16396 designation | PA6-I,GF30(R>50),M1,S14-090 |

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Physical properties** | | | | |
| Density | | ISO 1183 | g/cm³ | 1.35 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.2 - 0.4 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.7 - 0.9 |
| Viscosity number | 96% H2SO4 | ISO 307 | cm³/g | 135 |
| **Mechanical properties** | | | | **dam / cond.*** |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 8800 / 5800 |
| Stress at break | 5 mm/min | ISO 527-1/-2 | MPa | 130 / 85 |
| Strain at break | 5 mm/min | ISO 527-1/-2 | % | 3 / 6 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 7400 / 4700 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 190 / 120 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m² | 55 / 75 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 12 / 20 |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m² | 50 / 70 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m² | 11 / 20 |

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| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Thermal properties** | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 221 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 215 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 200 |
| Vicat softening temperature | 50°C/h - 50N | ISO 306 | °C | 210 |
| **Electrical properties** | | | | |
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1E+013 |
| **Burning behaviour** | | | | |
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | HB |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | < 100 mm/min |

*Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for black products.*
**: conditioned according to ISO 1110*

| | |
|---|---|
| **Processing conditions** | |
| Drying temperature/time | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Recommended melt temperature | 240 - 270 °C |
| Recommended mould temperature | 90 - 100 °C |

*These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.*

## Disclaimer