

TECHNICAL DATA SHEET

**TECHNYL 4EARTH C2E 216 BK**  
(Previously ECONAMID PLUS 6 BK)

Polyamide 6, for injection moulding, black

**General**

Polymer type	PA6 (Polyamide 6)		
Processing technology	Injection molding		
Certification	RoHS	EC 1907/2006 (REACH)	
Forms	Pellets		

**Product identification**

ISO 1043 abbreviation	PA6		
ISO 16396 designation	PA6,(R>50),M1,S14-030		

	Condition	Standard	Unit	Value
<b>Physical properties</b>				
Density		ISO 1183	g/cm <sup>3</sup>	1.14
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.3 - 3.4
Water absorption	24 hr, 23°C	ISO 62	%	1.9 - 2
Water absorption, saturation			%	9.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.8 - 1
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1
Melt flow rate, MFR		ISO 1133	g/10 min	10
Viscosity number	96% H2SO4	ISO 307	cm <sup>3</sup> /g	135

**TECHNICAL DATA SHEET**

**TECHNYL 4EARTH C2E 216 BK**

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3000 / 1000
Strain at break	50 mm/min	ISO 527-1/-2	%	15 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	70 / 40
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2650 / 850
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	95 / 30
Charpy impact strength, +23°C	+23°C	ISO 179/1eU		NB / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	5 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U		NB / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	4.5 / 20

**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	170
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	70
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	200

**Electrical properties**

Volume resistivity		IEC 62631-3-1	ohm.m	1E+016
Surface resistivity		IEC 62631-3-1	ohm	1E+014

**Burning behaviour**

Flammability, 0.75 mm	0.75 mm	UL 94		HB
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	650
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).  
\*: 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	230 - 260 °C
Recommended mould temperature	40 - 80 °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. These TECHNYL grades are not recommended for injection moulding hot runner systems with a diameter below 1mm.*

### 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.