

TECHNICAL DATA SHEET

**TECHNYL 4EARTH C2E 216 BK H**  
**ECONAMID FL 6 BK**



Polyamide 6, for injection moulding, black

**General**

Certifications	RoHS
Polymer type	PA6
Feature	recycled
Processing technology	injection moulding

**Product identification**

ISO 1043 abbreviation	PA6
ISO 16396 designation	PA6,(R100),M,S14-030

Condition	Standard	Unit	Value
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**Physical properties**

Property	Condition	Standard	Unit	Value
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 - 2.0
Water absorption, saturation			%	9.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.8 - 1.0
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1
Viscosity number	96% H2SO4	ISO 307	cm <sup>3</sup> /g	135.0

	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	kJ/m <sup>2</sup>	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	kJ/m <sup>2</sup>	NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	4.5 / 20
Rockwell hardness		ISO 2039/2	ScaleR	120 / -

\*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
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

	Condition	Standard	Unit	Value
<b>Burning behaviour</b>				
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

Condition	Standard	Unit	Value
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### Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1.0E16
Surface resistivity		IEC 62631-3-1	ohm	1.0E14

### 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

### 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 unfilled polyamides, Domo recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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.