

TECHNICAL DATA SHEET

TECHNYL 4EARTH C2E 216 V50 BK H
(Previously ECONAMID PLUS 6G50 BK)

Polyamide 6, 50% glass fiber reinforced, for injection moulding, black

General

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

Product identification

ISO 1043 abbreviation	PA6-GF50
ISO 16396 designation	PA6,GF50(R100),M1,S14-140

Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.57
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.6 - 1.7
Water absorption	24 hr, 23°C	ISO 62	%	1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.1 - 0.2
Molding shrinkage, normal		ISO 294-4, 2577	%	0.5 - 0.6

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	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	15000 / 8000
Stress at break	5 mm/min	ISO 527-1/-2	MPa	160 / 100
Strain at break	5 mm/min	ISO 527-1/-2	%	1.8 / 3.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	13000 / 7000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / 150
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	55 / 60
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	55 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	11 / 19
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	9 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	50 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	12 / -

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	205
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
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0

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

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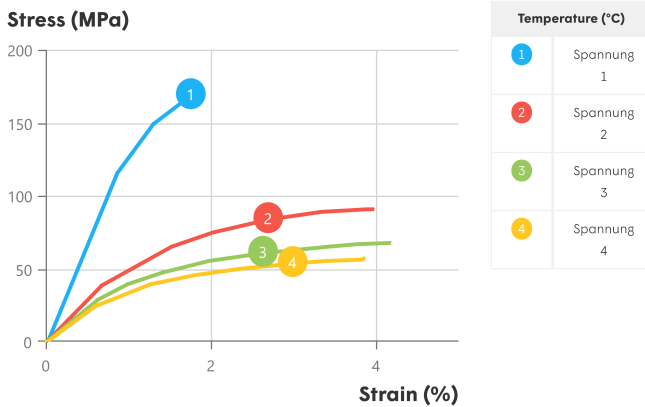
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Processing conditions

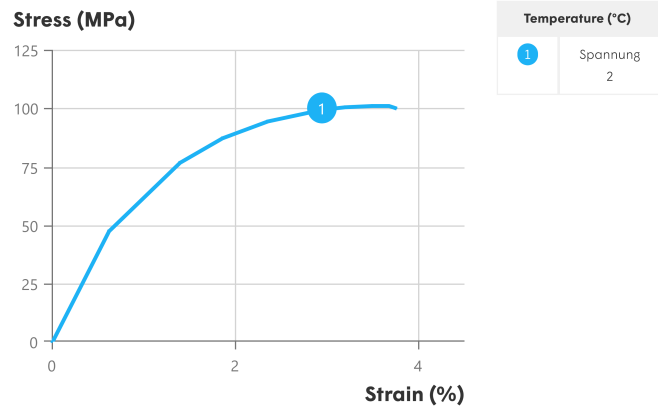
Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Suggested max moisture	0.2 %
Rear temperature	235 - 240 °C
Middle temperature	240 - 250 °C
Front temperature	250 - 260 °C
Recommended melt temperature	240 - 260 °C
Recommended mould temperature	60 - 90 °C

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

Stress-strain, dry



Stress-strain, conditioned



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.

Disclaimer

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