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TECHNYL® 4EARTH®
Sustainable polyamide

DOMO
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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

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	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/m²	55 / 60
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	55 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	11 / 19
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	9 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	50 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	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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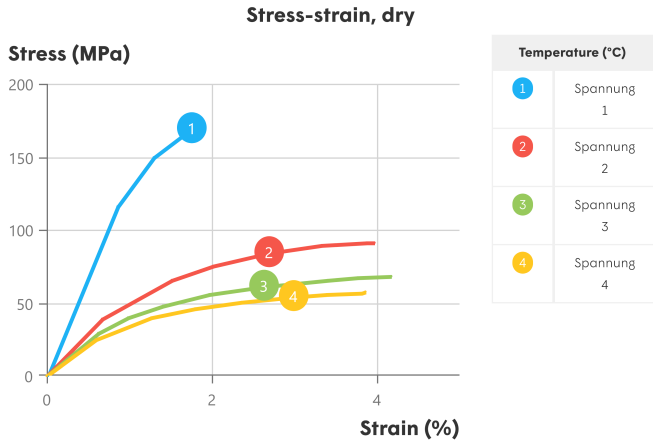
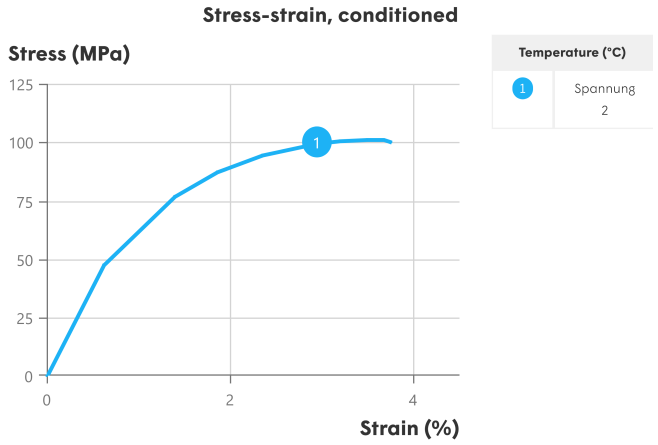
Processing conditions

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.





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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