

TECHNICAL DATA SHEET

TECHNYL 4EARTH C1E 216L2 V50 BK H
ECONAMID ORO 6G50UV3 114 BK



Recycled polyamide 6, 50% glass fiber reinforced, UV-stabilized, for injection molding, black

General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA6	
Feature	UV stabilized recycled	high stiffness
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	
Automotive homologations		

Product identification

ISO 1043 abbreviation	PA6(REC)-GF50
ISO 16396 designation	PA6,GF50(R100),MHL1,S14-190

Condition	Standard	Unit	Value
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Physical properties

Density		ISO 1183	g/cm ³	1.57
Humidity absorption	T=23°C, 50% RH (equivalent ISO 1110)	ISO 62	%	1.9 - 2.3
Water absorption	24 hr, 23°C, immersion in water, thickness 2mm	ISO 62	%	1.3 - 1.4
Water absorption, saturation			%	6.2
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.6 - 0.8
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.9

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	16500 / -
Stress at break		ISO 527-1/-2	MPa	190 / -
Strain at break		ISO 527-1/-2	%	2.4 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	14750 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	300 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	70 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	14 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	60 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	14 / -

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	220
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	217
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	210
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	215

	Condition	Standard	Unit	Value
Burning behaviour				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Processing conditions	
Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	250 - 290 °C
Recommended mould temperature	80 - 100 °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 reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 / 1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 / 1.2379 (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.