

TECHNICAL DATA SHEET

TECHNYL 4EARTH C2E 236 BK H
ECONAMID FL 6I2 BK



Recycled polyamide 66/6, 10% carbon fiber reinforced, heat-aging stabilized, improved tribological properties, for injection molding, natural color

General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA6	
Feature	impact modified not heat stabilized	recycled
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-I(REC)
ISO 16396 designation	PA6,(R100),MP,S14-020

Condition	Standard	Unit	Value
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Physical properties

Density		ISO 1183	g/cm ³	1.08
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.1 - 3.2
Water absorption	24 hr, 23°C	ISO 62	%	1.8 - 1.9
Water absorption, saturation			%	8.8
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.4 - 1.6
Molding shrinkage, normal		ISO 294-4, 2577	%	1.15 - 1.35
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	135.0

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	2400 / 750
Stress at break		ISO 527-1/-2	MPa	50 / 50
Strain at break	50 mm/min	ISO 527-1/-2	%	11 / 200
Yield stress	50 mm/min	ISO 527-1/-2	MPa	60 / -
Yield strain		ISO 527-1/-2	%	3.8 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2100 / 650
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	85 / 30
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	NB
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	13 / 65
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	15 / -
Rockwell hardness		ISO 2039/2	ScaleR	105 / -

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
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	145
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	50
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	175

	Condition	Standard	Unit	Value
Burning behaviour				
Flammability, 0.75 mm	0.75 mm	UL 94		HB
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	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E13

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)			
Recommended melt temperature	240 - 260 °C			
Recommended mould temperature	60 - 90 °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.