TECHNYL® 4EARTH®
Sustainable polyamide

DOMO
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TECHNICAL DATA SHEET

TECHNYL 4EARTH C1E 316 V30 BK H

ECONAMID ORO 6G30 BK

TECHNYL 4EARTH C1E 316 V30 BK H is a recycled polyamide 6, reinforced with 30% of glass fiber, medium viscosity for injection mouding.

General

Polymer type	PA6	
Certifications	RoHS	EC 1907/2006 (REACH)
Feature	medium viscosity	recycled
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6(REC)-GF30
ISO 16396 designation	PA6,GF30(R100),M,S14-090

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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.36
Humidity absorption	T=23°C, 50% RH (equivalent ISO 1110)	ISO 62	%	2.2 - 2.4
Water absorption	24 hr, 23°C, immersion in water, thickness 2mm	ISO 62	%	1.4 - 1.5
Water absorption, saturation			%	6.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.9
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm³/10 min	35.0
Viscosity number	96% H2SO4	ISO 307	cm³/g	180.0

	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9700 / -
Stress at break	5 mm/min	ISO 527-1/-2	MPa	150 / -
Strain at break	5 mm/min	ISO 527-1/-2	%	4 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	6000 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	210 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	70 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	11 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	60 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	11 / -

: conditioned according to ISO 1110

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Thermal properties

	Condition	Standard	Unit	Value
Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	220
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	200
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	215

Burning behaviour

	Condition	Standard	Unit	Value
Flammability, 0.75 mm	0.75 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Electrical properties

	Condition	Standard	Unit	Value
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	250 - 280 °C
Recommended mould temperature	90 - 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.