TECHNYL® 4EARTH®
Sustainable polyamide

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL 4EARTH C2E 316 BK H

Polyamide 6, for injection moulding, black

General

Feature	Medium viscosity	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
ISO 16396 designation	PA6,(R90),M,S14-030

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.13
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.8 - 1
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm³/10 min	125
Viscosity number	96% H2SO4	ISO 307	cm³/g	150
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3100 / 1000
Strain at break	50 mm/min	ISO 527-1/-2	%	20 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	70 / 40
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2700 / 900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	100 / 35
Charpy impact strength, +23°C	+23°C	ISO 179/1eU		NB / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	5 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U		NB / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	4.5 / 20

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	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	170
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	70
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	200
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+016
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Burning behaviour				
Flammability, 0.75 mm	0.75 mm	UL 94		HB
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	650
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).
**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Suggested max moisture	0.2 %
Recommended melt temperature	230 - 260 °C
Recommended mould temperature	40 - 80 °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. Thess TECHNYL grades are not recommended for injection moulding hot runner systems with a diameter below 1mm.

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.

Disclaimer