TECHNYL® SAFE
Food and water contact

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TECHNICAL DATA SHEET

TECHNYL SAFE D 219WFC V30 BK

(Previously TECHNYL EXTEN D 219WFC V30 BLACK)

TECHNYL D 219WFC V30 Black is a polyamide 6.10, reinforced with 30% of glass fibre, heat stabilized with organic stabilizers, for injection moulding. Designed to offer lower water uptake, higher dimensional stability and enhanced chlorine resistance versus PA 6.6 for cold and warm temperature in domestic and industrial water management components including, but not limited to, components in contact with drinking water where elevated levels of chlorine could be present.

General

Feature	Food contact approved Chemical resistant Drinking water certified Organic heat stabilized	High dimensional stability Contains renewable content Excellent hydrolysis resistant chlorine resistant
Polymer type	PA610 (Polyamide 610)	
Processing technology	Injection molding	
Certification	Food contact FDA ACS DGSNS 4 n° 2000-232 EC 1907/2006 (REACH) KTW guidelines WRAS BS6920-1: 2000 and 2014	RoHS DVGW W270 EU No 10/2011 NSF STD-61
Applications	Small appliance large appliance HVAC - heating system	pump / compressor / ventilator water meter
Colors available	Black Grey	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA610-GF30
ISO 16396 designation	PA610,GF300,M1,S14-090

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.31
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.1
Water absorption	24 hr, 23°C	ISO 62	%	0.36
Water absorption, saturation			%	2.4
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.35
Molding shrinkage, normal		ISO 294-4, 2577	%	0.75

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9200 / 6700
Stress at break		ISO 527-1/-2	MPa	150 / 107
Strain at break		ISO 527-1/-2	%	4.1 / 8
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7700 / -
Flexural modulus, ASTM D790	2 mm/min	ASTM D790	MPa	7200 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / -
Flexural strength, ASTM D790	2 mm/min	ASTM D790	MPa	235 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	100 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	11 / -
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	225
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	203
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	4E+013
Surface resistivity		IEC 62631-3-1	ohm	3E+015
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	27
Burning behaviour				
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	700

Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for black products.
**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	240 - 250 °C
Middle temperature	245 - 255 °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.

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.

Disclaimer

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