TECHNYL® SAFE
Food and water contact

DOMO
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TECHNICAL DATA SHEET

TECHNYL SAFE D 219WFC V50 BK

TECHNYL eXten D 219WFC V50 BLACK

TECHNYL SAFE D 219WFC V50 BK is a polyamide 6.10, 50% glass fibre reinforced, 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

Certifications	RoHS W270 KTW-BWGL WRAS	ACS EC 1907/2006 (REACH) NSF/ANSI Standard 61
Polymer type	PA610	
Feature	food contact approved contains renewable content excellent hydrolysis resistant organic heat stabilized	chemical resistant drinking water certified high dimensional stability chlorine resistant
Applications	small appliance large appliance HVAC - heating system	pump / compressor / ventilator water meter
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA610-GF50
ISO 16396 designation	PA610,GF50,MH,S14-160

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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.5
Humidity absorption	T=23°C, 50% RH	ISO 62	%	0.8 - 0.9
Water absorption	24 hr, 23°C	ISO 62	%	0.2 - 0.25
Water absorption, saturation			%	2.0
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.5 - 0.6

	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	DAM	ISO 527-1/-2	MPa	15000 / 11000
Stress at break		ISO 527-1/-2	MPa	195 / 155
Strain at break		ISO 527-1/-2	%	3.8 / 5.4
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	12800 / 9400
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	300 / 250
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	100 / 100
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	17 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	15 / 15

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	223
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	205

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Burning behaviour

	Condition	Standard	Unit	Value
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
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	2.6E13
Surface resistivity		IEC 62631-3-1	ohm	6.1E16
Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	26.0

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	240 - 250 °C
Middle temperature	245 - 255 °C
Front temperature	255 - 265 °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 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.

DOMO Engineering Plastics