TECHNYL®

DOMO caring is our formula

TECHNICAL DATA SHEET

TECHNYL SAFE A 219WFC V50 BK

TECHNYL A 218W V50 BLACK FA

TECHNYL SAFE A 219WFC V50 BK is a polyamide 66, 50% glass fibre reinforced, heat stabilized with organic stabiliser for injection moulding. Designed to offer an improved hydrolisis resistance and chlorine resistance vs standard PA66, for cold, warm and hot 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	PA66	
Feature	food contact approved drinking water certified high stiffness chlorine resistant	hydrolysis stabilized high dimensional stability organic heat stabilized
Applications	small appliance large appliance	pump / compressor / ventilator water meter
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66-GF50
ISO 16396 designation	PA66,GF500,M1,S14-160

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.55
Water absorption	24 hr, 23°C	ISO 62	%	0.6
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.14
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	16300 / 12500
Stress at break		ISO 527-1/-2	MPa	230 / 175
Strain at break		ISO 527-1/-2	%	2 / 2.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	13500 / 10000
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	88 / 85
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	14 / 18
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	14 / 16

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	255

	Condition	Standard	Unit	Value
Burning behaviour				
Flammability, 0.75 mm	0.75 mm	UL 94		HB
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, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	650
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Glow-wire flammability index, GWFI, 3.0 mm			°C	700
Oxygen index			%	23.0

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	Condition	Standard	Unit	Value
Electrical properties				
Surface resistivity		IEC 62631-3-1	ohm	1.0E14
Comparative tracking index	Solution A	IEC 60112	V	400.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	35.0

Processing conditions	
Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	280 - 290 °C
Front temperature	280 - 300 °C
Recommended mould temperature	70 - 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.