TECHNYL® SAFE
Food and water contact

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL SAFE A 219WFC V50 BK

(Previously 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

Feature	Food contact approved High dimensional stability High stiffness chlorine resistant	Hydrolisis stabilized Drinking water certified Organic heat stabilized
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS DVGW W270 KTW guidelines WRAS BS6920-1: 2000 and 2014	ACS DGSNS 4 n° 2000-232 EC 1907/2006 (REACH) NSF STD-61
Applications	Small appliance large appliance	pump / compressor / ventilator water meter
Colors available	Black	
Forms	Pellets	

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
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
Electrical properties				
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Comparative tracking index	Solution A	IEC 60112	V	400
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	35
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	3.0 mm	IEC 60695-2-12	°C	700
Oxygen index			%	23

**: conditioned according to ISO 1110*

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.

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