

TECHNICAL DATA SHEET

TECHNYL SAFE A 219WFC V30 BK
(Previously TECHNYL A 218W V30 BLACK FA)

TECHNYL SAFE A 219WFC V30 BK is a polyamide 66, 30% 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	UL HB Hydrolisis stabilized Good stiffness chlorine resistant	Food contact approved Drinking water certified Organic heat stabilized
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS ACS DGSNS 4 n° 2000-232 EC 1907/2006 (REACH) NSF STD-61	UL-Yellow Card DVGWW270 KTW guidelines WRAS BS6920-1: 2000 and 2014
Applications	pump / compressor / ventilator water filter / purifier	large appliance
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF30
ISO 16396 designation	PA66,GF300,M1,S14-100

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.36
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.2 - 2.4
Water absorption	24 hr, 23°C	ISO 62	%	0.8
Water absorption, saturation			%	5.3
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1

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	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 7500
Stress at break		ISO 527-1/-2	MPa	185 / 130
Strain at break		ISO 527-1/-2	%	3 / 7
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9000 / 6400
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	275 / 180
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	75 / 85
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	11 / 15
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	10 / 13


Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	261
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	255

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+015
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

UL Yellow Card availability 	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
Flammability, 0.75 mm	0.75 mm	UL 94		HB
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650

*: conditioned according to ISO 1110

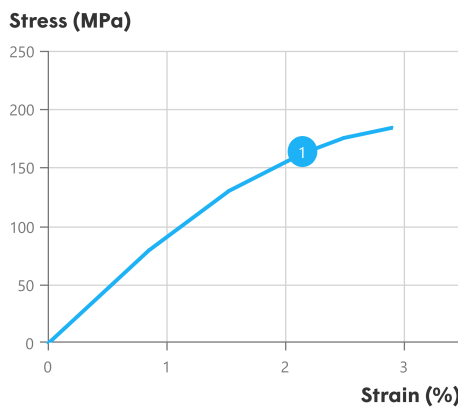
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Processing conditions

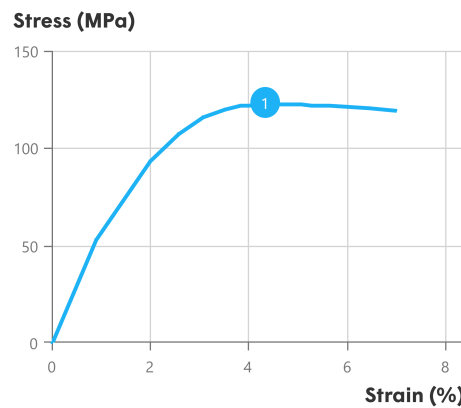
Drying temperature/time	80 °C
Suggested max moisture	0.15 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended melt temperature	270 - 290 °C
Recommended mould temperature	70 - 100 °C

Stress-strain, dry



Temperature (°C)	
1	Spannung
1	

Stress-strain, conditioned



Temperature (°C)	
1	Spannung
4	

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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