

TECHNICAL DATA SHEET

TECHNYL SAFE A 219WFC V30 NC

TECHNYL A 218W V30 NATURAL

TECHNYL SAFE A 219WFC V30 NC is a polyamide 66, 30% glass fibre reinforced, heat stabilized with organic stabiliser for injection moulding. Designed to offer an improved hydrolysis 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

Polymer type	PA66	
Certifications	RoHS W270 KTW-BWGL WRAS	UL listed product EC 1907/2006 (REACH) NSF/ANSI Standard 61
Feature	food contact approved UL HB(obs) good stiffness chlorine resistant	hydrolysis stabilized drinking water certified organic heat stabilized
Applications	small appliance large appliance water filter / purifier	pump / compressor / ventilator HVAC - heating system
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

Product identification

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

Condition	Standard	Unit	Value
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Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm ³	1.36	
Water absorption	24 hr, 23°C	ISO 62	%	0.8
Molding shrinkage, parallel	ISO 294-4, 2577	%	0.35	
Molding shrinkage, normal	ISO 294-4, 2577	%	1.1	

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 7000
Stress at break		ISO 527-1/-2	MPa	190 / 125
Strain at break		ISO 527-1/-2	%	3 / 7
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9000 / 6300
Flexural modulus, ASTM D790	2 mm/min	ASTM D790	MPa	9000 / 7000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	275 / 217
Flexural strength, ASTM D790	2 mm/min	ASTM D790	MPa	270 / 135
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	85 / 95
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	12 / 15
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	75 / 85
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	12 / 16

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
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

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716			
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	650

Condition	Standard	Unit	Value
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Electrical properties

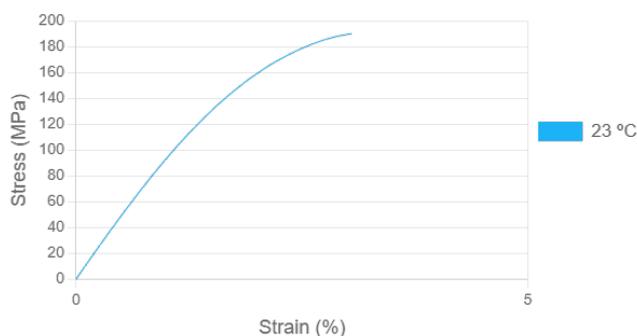
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E15
Comparative tracking index	Solution A	IEC 60112	V	400.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	35.0

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended mould temperature	70 - 100 °C

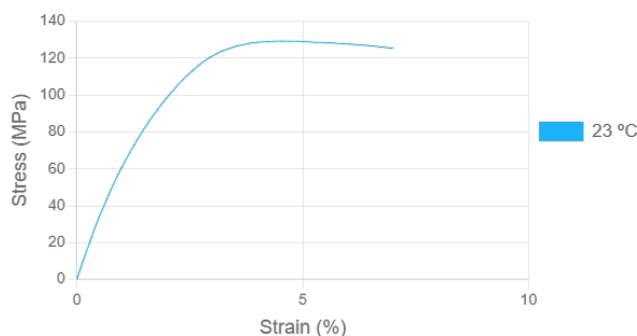
Stress-strain, dry

Temperature (°C)



Stress-strain, conditioned

Temperature (°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.