

EXPERIMENTAL DATASHEET

TECHNYL SAFE C 216WFC V30 BK

TECHNYL SAFE C 216WFC V30 BK is a polyamide 6, 30% glass fibre reinforced, food contact and drinking water approved, for injection moulding. Designed to be used in moulded part requiring good stiffness and hydrolysis resistance in consumer & industrial goods as well as appliances in contact with drinking water. WRAS approval at 85°C.

General

Feature	Food contact approved	Drinking water contact approved
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	Food contact EU RoHS WRAS BS6920-1: 2000 and 2014	Food contact FDA EC 1907/2006 (REACH)
Applications	Small appliance Industrial Applications	Consumer good application large appliance
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF30
ISO 16396 designation	PA6,GF30,M1,S14-090

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.36
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.25 - 0.45
Molding shrinkage, normal		ISO 294-4, 2577	%	0.85 - 1.05
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm ³ /10 min	40

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	Condition	Standard	Unit	Value dam / cond.*
Mechanical properties				
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9500 / 5300
Stress at break		ISO 527-1/-2	MPa	170 / 110
Strain at break		ISO 527-1/-2	%	4 / 9
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7200 / 4500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	270 / 150
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	95 / 110
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	75 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	14 / 25
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	11 / -

Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	220
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	205
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	214

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Comparative tracking index	Solution A	IEC 60112	V	500
CTI performance level category		Sol A		PLC 1

Burning behaviour

Flammability, 0.75 mm	0.75 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Test run at 23°C if not differently specified, DAM state (dry as moulded).
*: conditioned according to ISO 1110

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	250 - 290 °C
Recommended mould temperature	80 - 100 °C

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

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