TECHNYL® SAFE
Food and water contact

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EXPERIMENTAL DATASHEET

TECHNYL SAFE C 216WFC V30 NC

TECHNYL SAFE C 216WFC V30 NC 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

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	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	cm³/10 min	40
Viscosity number	96% H2SO4	ISO 307	cm³/g	145

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
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. Thess TECHNYL grades are not recommended for injection moulding hot runner systems with a diameter below 1mm.

Disclaimer

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