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TECHNYL® SAFE
Food and water contact

DOMO
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EXPERIMENTAL DATASHEET

TECHNYL SAFE C 216WFC V50 BK

TECHNYL SAFE C 216WFC V50 BK is a polyamide 6, 50% glass fibre reinforced, food contact and drinking water approved, for injection moulding. Designed to be used in moulded part requiring improved stiffness, dimensional stability and hydrolysis resistance versus PA6GF30 in consumer & industrial goods as well as appliances in contact with drinking water. WRAS approval at 85°C.

General

Feature	Food contact approved Good stiffness	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-GF50
ISO 16396 designation	PA6,GF50,M1,S14-160

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.56
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.25 - 0.45
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm³/10 min	15
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	16500 / 9300
Stress at break		ISO 527-1/-2	MPa	235 / 150
Strain at break		ISO 527-1/-2	%	3 / 6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	12500 / 9100
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	95 / 105
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	100 / 105
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	20 / 30
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	16 / 17
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	221
Burning behaviour				
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)
Rear temperature	250 - 270 °C
Middle temperature	260 - 280 °C
Front temperature	260 - 290 °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.

Disclaimer