TECHNYL® SAFE
Food and water contact

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TECHNICAL DATA SHEET

TECHNYL SAFE A 216FC V30 NC

(Previously TECHNYL A 216 V30 NATURAL FA)

TECHNYL SAFE A 216FC V30 NC is a polyamide 66, 30% glass fiber reinforced, food contact approved for injection moulding. Designed to be used in moulded parts requiring an excellent combination of thermal amd mechanical properties and food contact compliance in industrial consumer good as well as appliances applications.

General

Feature	UL HB	Food contact approved
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Applications	Small appliance Industrial Applications large appliance	Consumer good application building / construction
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF30

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.37
Water absorption	24 hr, 23°C	ISO 62	%	0.8
Water absorption, saturation			%	5.3
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 7100
Stress at break		ISO 527-1/-2	MPa	190 / 125
Strain at break		ISO 527-1/-2	%	3 / 6.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9100 / 6350
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	280 / 195
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	75 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	11 / 14
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	12 / 15

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	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
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	6E+015
Comparative tracking index	Solution A	IEC 60112	V	22
CTI performance level category		Sol A		PLC 5
Dielectric strength	1 mm	IEC 60243-1	kV/mm	40
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
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Oxygen index			%	23
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

**: conditioned according to ISO 1110*

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

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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