TECHNYL® SAFE
Food and water contact

DOMO
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TECHNICAL DATA SHEET

TECHNYL SAFE C 216FC V50 NC

DOMAMID 6G50FC 300 NC

SAFE C 216FC V50 NC is a polyamide 6, 50% glass fiber reinforced, food contact approved for injection moulding. Designed to be used in moulded part requiring good mechanical properties and food contact compliance in industrial consumer good as well as appliance applications.

General

Polymer type	PA6	
Certifications	RoHS	
Feature	food contact approved good strength not heat stabilized	good stiffness high stiffness
Applications	small appliance industrial applications	consumer applications large appliance
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-GF50
ISO 16396 designation	PA6,GF50,M,S14-160

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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.56
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.9 - 2.3
Water absorption	24 hr, 23°C	ISO 62	%	1.3 - 1.4
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	15.0
Viscosity number	96% H2SO4	ISO 307	cm³/g	145.0

	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	16500 / 9300
Stress at break	5 mm/min	ISO 527-1/-2	MPa	235 / 150
Strain at break	5 mm/min	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

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	221

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	Condition	Standard	Unit	Value

Burning behaviour

Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

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

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.