TECHNYL® SAFE
Food and water contact

DOMO
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TECHNICAL DATA SHEET

TECHNYL SAFE A 216FC NC

TECHNYL A 216 NATURAL FA

TECHNYL SAFE A 216FC NC is a polyamide 66, unfilled, food contact approved for injection moulding. Designed to be used in moulded parts requiring food contact compliance in industrial consumer good as well as appliances applications.

General

Polymer type	PA66	
Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Feature	food contact approved not heat stabilized	UL 94 V2
Applications	small appliance industrial applications building / construction	consumer applications large appliance
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66
ISO 16396 designation	PA66,M,S14-030

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.14
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.1 - 3.2
Water absorption	24 hr, 23°C	ISO 62	%	1.2 - 1.3
Water absorption, saturation			%	8.3
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.6
Molding shrinkage, normal		ISO 294-4, 2577	%	1.5

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3000 / 1500
Stress at break		ISO 527-1/-2	MPa	80 / 65
Strain at break		ISO 527-1/-2	%	30 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2900 / 1300
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 50
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4.5 / 14
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	4 / 12

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	200
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	75

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	**Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716**			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Flammability, 1.5 mm	1.5 mm	UL 94		V2
Flammability, 3.0 mm	3.0 mm	UL 94		V2
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	650
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100 mm/min

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	Condition	Standard	Unit	Value

Electrical properties

Dielectric strength	1 mm	IEC 60243-1	kV/mm	22.0

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	270 - 280 °C
Front temperature	280 - 285 °C
Recommended mould temperature	60 - 80 °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 unfilled polyamides, Domo recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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.