TECHNYL® SAFE
Food and water contact

DOMO
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TECHNICAL DATA SHEET

TECHNYL SAFE C 216FC NC

DOMAMID 6FC NC

TECHNYL SAFE C 216FC NC is a polyamide 6, 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 appliance applications.

General

Certifications	Food contact EU UL listed product	RoHS
Polymer type	PA6	
Feature	food contact approved	UL 94 V2
Applications	small appliance industrial applications	consumer applications large appliance
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6
ISO 16396 designation	PA6,M,S14-030

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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.14
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.3 - 3.4
Water absorption	24 hr, 23°C	ISO 62	%	1.9 - 2.0
Water absorption, saturation			%	9.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.9 - 1.1
Molding shrinkage, normal		ISO 294-4, 2577	%	1.0 - 1.2
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm³/10 min	165.0
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	3200 / 1000
Strain at break	50 mm/min	ISO 527-1/-2	%	40 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	80 / 40
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2800 / 900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	105 / 35
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4.5 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	4.5 / 19
Rockwell hardness		ISO 2039/2	ScaleR	120 / -

: conditioned according to ISO 1110

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Thermal properties

	Condition	Standard	Unit	Value
Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	175
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	65
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	200

Burning behaviour

	Condition	Standard	Unit	Value
UL Yellow Card availability 1	**Click here to have access to the UL Yellow Card availability 1 -> E170540-225449**			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	750
Glow-wire flammability index, GWFI, 3.0 mm			°C	850
Glow-wire flammability index, GWFI	1.0 mm	IEC 60695-2-12	°C	>= 750
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Electrical properties

	Condition	Standard	Unit	Value
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E13
Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	230 - 250 °C
Recommended mould temperature	60 - 90 °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.