

TECHNICAL DATA SHEET

**TECHNYL SAFE C 216MFC NC**  
**DOMAMID 6I1FC**



TECHNYL SAFE C 216MFC NC is a polyamide 6, unfilled, impact modified, 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**

Polymer type	PA6	
Certifications	Food contact EU	RoHS
Feature	food contact approved	impact modified
Applications	small appliance industrial applications	consumer applications large appliance
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

**Product identification**

ISO 1043 abbreviation	PA6-I
ISO 16396 designation	PA6,MP,S14-030

Condition	Standard	Unit	Value
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**Physical properties**

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm <sup>3</sup>	1.11	
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	%		1.1 - 1.3
Molding shrinkage, normal	ISO 294-4, 2577	%		1.4 - 1.6
Viscosity number	96% H2SO4	ISO 307	cm <sup>3</sup> /g	145.0

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	2700 / 1000
Strain at break	50 mm/min	ISO 527-1/-2	%	50 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	70 / 40
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2300 / 900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	90 / 30
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	NB
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	18 / 80
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m <sup>2</sup>	10 / 9
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	15 / 75
Rockwell hardness		ISO 2039/2	ScaleR	110 / -

\*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	155
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	60
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	190

	Condition	Standard	Unit	Value
<b>Burning behaviour</b>				
Flammability, 0.75 mm	0.75 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Condition	Standard	Unit	Value
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### Electrical properties

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	240 - 260 °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 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.