

TECHNICAL DATA SHEET

## TECHNYL KC 246 NC

### TECHNYL ALLOY KC 246 NATURAL

TECHNYL KC 246 NC is an unfilled grade based on blend of polyamide 6 and acrylonitrile butadiene styrene (PA6 + ABS), impact modified, for injection moulding. This grade offers high mechanical properties, good dimensional stability and good processability. This grade offers an excellent impact with an ideal combination between stiffness and toughness. It is a synergistic blend material between Polyamide 6 and ABS with an ideal property combination, meaning that it has dual characteristics between semi-crystalline and amorphous polymers.

#### General

Polymer type	PA6 + ABS blend		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	high impact resistant		
Applications	home & office furniture	sport	
Colors available	black grey	natural	
Forms	pellets		
Processing technology	injection moulding		

#### Product identification

ISO 1043 abbreviation	PA6+ABS
-----------------------	---------

Condition	Standard	Unit	Value
-----------	----------	------	-------

#### Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	1.08
Water absorption	24 hr, 23°C	ISO 62	%	0.9
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.0 - 1.2
Molding shrinkage, normal		ISO 294-4, 2577	%	1.0 - 1.2

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	2250 / -
Stress at break		ISO 527-1/-2	MPa	53 / -
Strain at break		ISO 527-1/-2	%	94 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2150 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	63 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	48 / -

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

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	225
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	105
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	70

	Condition	Standard	Unit	Value
<b>Burning behaviour</b>				
Flammability, 0.75 mm	0.75 mm	UL 94		HB
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	750
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Glow-wire flammability index, GWFI, 3.0 mm			°C	960

	Condition	Standard	Unit	Value
<b>Electrical properties</b>				
Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0

## Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	235 - 240 °C
Middle temperature	240 - 250 °C
Front temperature	250 - 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.