

TECHNICAL DATA SHEET

TECHNYL AR1 216 V30 BK

TECHNYL AR1 216 V30 BK is a wide specs polyamide PA 66, reinforced with 30% of GF, for Injection moulding. This grade offers a good mechanical performance compare to a virgin material.

General

Polymer type	PA66
Certifications	RoHS EC 1907/2006 (REACH)
Feature	second choice
Colors available	black
Forms	pellets
Processing technology	injection moulding

Product identification

ISO 1043 abbreviation	PA66,GF30
ISO 16396 designation	PA66,GF30,M,S14-070

Condition	Standard	Unit	Value
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Physical properties

Property	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.35
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.2 - 2.4
Water absorption	24 hr, 23°C	ISO 62	%	0.8
Water absorption, saturation			%	5.3

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	8000 / 5500
Stress at break		ISO 527-1/-2	MPa	150 / 95
Strain at break		ISO 527-1/-2	%	2.4 / 5.1
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7000 / 4900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	230 / 160
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	50 / 62
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	7.5 / -

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	260

	Condition	Standard	Unit	Value
Burning behaviour				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100mm/min

Processing conditions	
Drying temperature/time	80°C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended mould temperature	70 - 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.

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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.