

TECHNICAL DATA SHEET

## TECHNYL A 218G2 V50 BK 34N

TECHNYL A 218G2 V50 BK 34N is a polyamide 66, reinforced with 50% of glass fiber, heat stabilized, for injection moulding. This grade has been specially designed to improve its resistance to automotive cooling liquids, increasing lifetime of parts in permanent contact with such liquids.

### General

Polymer type	PA66		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	heat-aging stabilized high glycol resistant	hydrolysis stabilized high stiffness	
Applications	automotive applications		
Colors available	black		
Forms	pellets		
Processing technology	injection moulding		

### Product identification

ISO 1043 abbreviation	PA66-GF50
ISO 16396 designation	PA66,GF30,MHW,S14-160

Condition	Standard	Unit	Value
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### Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm <sup>3</sup>	1.57	
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.6 - 1.7
Water absorption	24 hr, 23°C	ISO 62	%	0.6
Molding shrinkage, parallel	ISO 294-4, 2577	%		0.3 - 0.5
Molding shrinkage, normal	ISO 294-4, 2577	%		0.8 - 0.9

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	16500 / 11500
Stress at break		ISO 527-1/-2	MPa	245 / 160
Strain at break		ISO 527-1/-2	%	3 / 5.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	14000 / 11000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	355 / 270
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	100 / 105
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	95 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	15 / 21

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

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	255

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

## Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.15 %
Rear temperature	270 - 280 °C
Middle temperature	280 - 290 °C
Front temperature	280 - 300 °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.

## 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.