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TECHNICAL DATA SHEET

TECHNYL D 218CR V50 BK

(Previously TECHNYL EXTEN D 218CR V50 BLACK)

TECHNYL D 218CR V50 BK is a high glass reinforced grade based on polyamide blend of polyamide 6.10 and polyamide 66, heat stabilized, for injection moulding. This grade shows outstanding resistance to hydrolysis, very low water uptake, enhanced dimension stability and chemical resistance to long life automotive coolants. It also offers an excellent crack resistance to calcium chloride road salts, good injection process ability, high surface aspect quality, and overall high thermo-mechanical properties.

General

Feature	road salt resistant Contains renewable content Low moisture absorption	Chemical resistant Excellent glycol resistant
Polymer type	(PA610 + PA66) blend	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications	
Colors available	Black	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA610+PA66-GF50
ISO 16396 designation	PA610+PA66,GF50,M1,S14-160

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.54
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.1
Water absorption	24 hr, 23°C	ISO 62	%	0.45 - 0.5
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.5
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.9

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	16800 / 11600
Stress at break		ISO 527-1/-2	MPa	225 / 165
Strain at break		ISO 527-1/-2	%	3 / 5.1
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	13600 / 9400
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	345 / 250
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	100 / 100
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	110 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	17 / 20
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	14 / -
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	214
Burning behaviour				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	80 °C / 4 h
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.

Disclaimer

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