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TECHNICAL DATA SHEET

TECHNYL D 218CR V33 BK

(Previously TECHNYL EXTEN D 218CR V33 BLACK)

TECHNYL D 218CR V33 BK is a glass fiber 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 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 high overall mechanical and thermal properties.

General

Feature	Heat-aging stabilized Chemical resistant Excellent glycol resistant Good surface finish	road salt resistant Contains renewable content Excellent hydrolysis resistant Low moisture absorption
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-GF33

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.35
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.6
Water absorption	24 hr, 23°C	ISO 62	%	0.3
Water absorption, saturation			%	3.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2 - 0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.85 - 0.95

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	11300 / 8900
Stress at break		ISO 527-1/-2	MPa	195 / 130
Strain at break		ISO 527-1/-2	%	3.3 / 4.8
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	10050 / 8000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	300 / 200
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	90 / -
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	70 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	12 / 13
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	9 / 10
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	260
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	225
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	218
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+015
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	34
Burning behaviour				
Flammability, 0.40 mm	0.40 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

**: conditioned according to ISO 1110*

Processing conditions	
Drying temperature/time	80 °C / 2-4 h
Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	270 - 280 °C
Front temperature	275 - 285 °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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