

Menzolit® CarbonSMC 1100

Thermoset Polyester

Menzolit Ltd (UK)

Message:

Menzolit® CarbonSMC 1100 is a developmental carbon fibre SMC for high strength applications. The reinforcement has been put to a level that combines mouldability with high strength and stiffness properties. The specific resin and a high amount of carbon fibers provide high mechanical strength. Durability is improved as well. Even without a specific fire retardant, the fire retardancy level HB according UL 94 is achieved. Typical applications are structural components within the automotive industry or mechanical engineering. It is suitable for load carrying applications or fast moving and accelerated components.

General Information			
Filler / Reinforcement	Mineral filler		
	Carbon fiber reinforced material, 30% filler by weight		
Features	Low smoke		
	Rigidity, high		
	High strength		
	Good formability		
	Durability		
	Halogen-free		
Uses	Components		
	Application in Automobile Field		
Forms	Particle		
Processing Method	Compression molding		
Part Marking Code (ISO 11469)	>UP- CF60		
Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm ³	ISO 1183
Molding Shrinkage	-0.17	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.50	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Compression Molded)	32000	MPa	ISO 527-2
Tensile Stress (Yield, Compression Molded)	138	MPa	ISO 527-2
Tensile Strain (Break, Compression Molded)	1.5	%	ISO 527-2
Flexural Modulus (Compression Molded)	28000	MPa	ISO 178
Flexural Stress (Compression Molded)	324	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Compression Molded)	57	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method

Glass Transition Temperature	162	°C	DSC
CLTE - Flow	8.0E-6	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating (2.00 mm)	HB		UL 94

Additional Information

Fibre Content UD, total EN ISO 1172: 60%Post Moulding Shrinkage DIN 53464: 0,00%Heat Distortion Temp. EN ISO 75-2: >200°CGlass Transition Temp. ISO 11357-2: 162°CContinuous Service Temp. Menzolit method: 170°CPOison's Ratio Menzolit method: 0,30Matrix Crazing Strain Menzolit method: 0,50%Compression Strength EN ISO 14126: 140 MPaThe value listed as Molding Shrinkage ISO 294-4, was tested in accordance with ISO 2577.The values listed as Flexural Strength and Flexural Modulus, ISO 178, were tested in accordance with EN ISO 14125.

Injection	Nominal Value	Unit
Mold Temperature	155 - 160	°C
Injection Pressure	5.00 - 12.0	MPa

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