Menzolit® AdvancedSMC 0400

Thermoset Polyester

Menzolit Ltd (UK)

Message:

Menzolit® AdvancedSMC 0400 is a special low profile SMC for applications within the automotive industry. It satisfies the surface quality needed for automotive body panels. It complies with all automotive regulations, C-Emissions are minimized. To achieve the highest surface quality, we recommend that tool surfaces are mirror polished. The temperature resistance of AdvancedSMC allows online painting at standard bake temperatures. The product shows very good adhesion to paint or In Mould Coating (IMC). Because of its zero shrink properties, warpage is eliminated and parts reproducing the dimensions of the cold mould can be produced. Figures given apply to a quasi isotropic 6-layer [0/90/45/-45/90/0] design, different layer designs are possible, please contact our R&D departement. Please check storage conditions printed on packaging label.

General Information			
Filler / Reinforcement	Mineral filler Carbon fiber reinforced material		
Features	Good dimensional stability Low warpage Low smoke Sprayable Good adhesion Low shrinkage Halogen-free Excellent appearance		
Uses	Application in Automobile Field		
Forms	Particle		
Part Marking Code (ISO 11469)	>UP-(CF+MD)73		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.67	g/cm³	ISO 1183
Molding Shrinkage (0°C)	-0.012	%	ISO 294-4
Water Absorption (Saturation, 23°C)	1.0	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			ISO 527-2
0°C, compression molding	32000	MPa	ISO 527-2
90°C, compression molding	32000	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield, 0°C, compression molding	200	MPa	ISO 527-2
Yield, 90°C, compression molding	200	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Fracture, 0°C, compression molding	1.4	%	ISO 527-2
Fracture, 90°C, compression molding	2.0	%	ISO 527-2
Flexural Modulus			ISO 178

0°C, compression molding	40000	MPa	ISO 178
90°C, compression molding	20000	MPa	ISO 178
Flexural Stress			ISO 178
0°C, compression molding	400	MPa	ISO 178
90°C, compression molding	400	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179
0°C, compression molding	70	kJ/m^2	ISO 179
90°C, compression molding	70	kJ/m^2	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	185	°C	DSC
CLTE - Flow			ISO 11359-2
0°C	1.7E-6	cm/cm/°C	ISO 11359-2
90°C	1.7E-6	cm/cm/°C	ISO 11359-2
Flammability	**Nominal Value**		**Test Method**
Flame Rating (2.00 mm)	HB		UL 94

Additional Information

Post Moulding Shrinkage, DIN 53464: 0%Heat Distortion Temperature, EN ISO 75-2: >200°CContinuous Service Temperature, Menzolit Method: 180°CFiber Content UD, total, EN ISO 1172, 90°C: 38%Fiber Content UD, total, EN ISO 1172, 0°C: 54%Poison's Ratio, Menzolit Method, 0°C: 0.3Poison's Ratio, Menzolit Method, 90°C: 0.3Matrix Crazing Strain, Menzolit Method: 0.5%Compression Strength, EN ISO 14126, 0°C: 200 MPaThe value listed as Glass Transition Temp DSC, was tested in accordance with ISO 11357-2.The values listed as Flexural Strength and Lfexural Modulus, ISO 178, were tested in accordance with EN ISO 14125

Injection	Nominal Value	Unit
Mold Temperature	155 - 160	°C
Injection Pressure	10.0 - 16.0	MPa

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