

TECACOMP® PBT TC black 4207

Polybutylene Terephthalate

Ensinger GmbH

Message:

Main features

high thermal conductivity

electrically conductive

Target Industries

electrical engineering

mechanical engineering

automotive industry

General Information			
Filler / Reinforcement	Graphite fiber reinforced material		
Features	Conductivity		
	Heat conduction		
Uses	Application in Automobile Field		
Appearance	Black		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.59	g/cm ³	
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	19	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	12.0	cm ³ /10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	< 0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8500	MPa	ISO 527-2
Tensile Stress	45.0	MPa	ISO 527-2
Tensile Strain (Break)	1.0	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength	8.0	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	190	°C	ISO 75-2/A
Glass Transition Temperature	60.0	°C	DIN 53765
Melting Temperature	225	°C	DIN 53765
CLTE - Flow			ISO 11359-2
23 to 45°C	2.8E-5	cm/cm/°C	ISO 11359-2
70 to 120°C	4.9E-5	cm/cm/°C	ISO 11359-2
Specific Heat	1500	J/kg/°C	DIN EN 821

Thermal Conductivity			DIN EN 821
-- ¹	3.0	W/m/K	DIN EN 821
-- ²	12	W/m/K	DIN EN 821
Service Temperature			
long term	110	°C	
short term	170	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+4	ohms	DIN EN 61340
Volume Resistivity	< 1.0E+6	ohms·cm	DIN EN 61340
Flammability	Nominal Value	Unit	Test Method
Flammability Classification	HB		IEC 60695-11-10, -20
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 - 6.0	hr	
Suggested Max Moisture	0.020	%	
Processing (Melt) Temp	240 - 270	°C	
Mold Temperature	130	°C	
NOTE			
1.	Through-plane		
2.	In-plane		

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