

TECACOMP® PBT TC white 4038

Polybutylene Terephthalate
Ensinger GmbH

Message:

Main features
high thermal conductivity
very good electrical insulation
Target Industries
LED lighting technology
electrical engineering
mechanical engineering
automotive industry

General Information			
Filler / Reinforcement	Ceramic fiber filler		
Features	Heat conduction		
	Insulation		
Uses	LEDs		
	Lighting Applications		
	Application in Automobile Field		
Appearance	White		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.98	g/cm ³	
Apparent Density	1.00	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	120	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	135	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Transverse flow	1.7	%	ISO 294-4
Flow	1.6	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	< 0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6500	MPa	ISO 527-2/50
Tensile Stress	60.0	MPa	ISO 527-2/50
Tensile Strain (Break)	1.4	%	ISO 527-2/50
Flexural Modulus ¹	6200	MPa	ISO 178
Flexural Stress ²	82.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method

Charpy Unnotched Impact Strength	17	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	155	°C	ISO 75-2/A
Glass Transition Temperature	60.0	°C	DIN 53765
Melting Temperature	225	°C	DIN 53765
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 40°C	6.9E-5	cm/cm/°C	ISO 11359-2
Flow: 60 to 110°C	1.1E-4	cm/cm/°C	ISO 11359-2
Horizontal: 23 to 40°C	6.8E-5	cm/cm/°C	ISO 11359-2
Horizontal: 60 to 110°C	1.1E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity			DIN EN 821
-- ³	1.3	W/m/K	DIN EN 821
-- ⁴	1.4	W/m/K	DIN EN 821
Service Temperature			
long term	110	°C	
short term	170	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.3E+12	ohms	DIN EN 61340
Volume Resistivity	4.0E+13	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.	50 mm/min		
2.	50 mm/min		
3.	Through-plane		
4.	In-plane		

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