

TECACOMP® PA66 TC black 3989

Polyamide 66
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	1.48	g/cm ³	
Apparent Density	0.70	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	48	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)	32.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Transverse flow	1.0	%	ISO 294-4
Flow	0.78	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	1.5	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8000	MPa	ISO 527-2/50
Tensile Stress	55.0	MPa	ISO 527-2/50
Tensile Strain (Break)	1.4	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength	10	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	232	°C	ISO 75-2/A
Glass Transition Temperature	50.0	°C	DIN 53765
Melting Temperature	255	°C	DIN 53765

Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 100°C	3.8E-5	cm/cm/°C	ISO 11359-2
Flow: 100 to 150°C	7.1E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 100°C	4.7E-5	cm/cm/°C	ISO 11359-2
Horizontal: 100 to 150°C	7.4E-5	cm/cm/°C	ISO 11359-2
Specific Heat	1500	J/kg/°C	DIN EN 821
Thermal Conductivity			DIN EN 821
-- ¹	2.8	W/m/K	DIN EN 821
-- ²	11	W/m/K	DIN EN 821
Service Temperature			
long term	110	°C	
short term	170	°C	
Thermal Diffusivity			DIN EN 821
In-plane	5.10	cSt	DIN EN 821
Through-plane	1.30	cSt	DIN EN 821
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
--	3.5E+5	ohms·cm	ISO 3915
Flammability	Nominal Value	Unit	Test Method
Flammability Classification	HB		IEC 60695-11-10, -20
Injection	Nominal Value	Unit	
Drying Temperature	80	°C	
Drying Time	4.0 - 5.0	hr	
Processing (Melt) Temp	260 - 295	°C	
Mold Temperature	100 - 150	°C	
NOTE			
1.	Through-plane		
2.	In-plane		

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