

CABELEC® CA3899

Acetal (POM) Copolymer

Cabot Corporation

Message:

CABELEC® 3899 is an electrically conductive compound based on carbon black and a polyacetal copolymer. Its electrical properties are permanent and are not dependent on atmospheric conditions. The compound can easily be processed on conventional molding equipment.

CABELEC 3899 is principally recommended for applications where freedom from the hazard of electrostatic discharge is requested. Examples of use are in handling of explosive powders, pigments, liquids and electronic components.

General Information			
Additive	Carbon Black		
Features	Copolymer		
	Electrically Conductive		
	Good Processability		
Uses	Electrical/Electronic Applications		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.39	g/cm ³	Internal Method
Melt Mass-Flow Rate (MFR) ²			ISO 1133
190°C/10.0 kg	28	g/10 min	
190°C/2.16 kg	3.0	g/10 min	
190°C/5.0 kg	9.3	g/10 min	
Molding Shrinkage - Flow ³	1.5 to 2.5	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness ⁴ (Shore D, 15 sec)	79		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress ⁵			ISO 527-2
Yield	45.7	MPa	
Break	45.2	MPa	
Tensile Strain ⁶ (Break)	42	%	ISO 527-2
Flexural Modulus ⁷	1900	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ⁸ (23°C)	11	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁹ (1.8 MPa, Unannealed)	72.0	°C	ISO 75-2/A
Vicat Softening Temperature ¹⁰	168	°C	ISO 306/A

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ¹¹	5.0E+2	ohms	IEC 60093
Volume Resistivity ¹²	39	ohms·cm	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	80.0 to 100	°C	
Drying Time	3.0 to 4.0	hr	
Rear Temperature	180	°C	
Middle Temperature	180	°C	
Front Temperature	180	°C	
Nozzle Temperature	200	°C	
Mold Temperature	60.0	°C	
NOTE			
1.	CTM E023		
2.	CTM E005		
3.	CTM E047		
4.	CTM E030		
5.	CTM E041		
6.	CTM E041		
7.	CTM E040A		
8.	CTM E044A		
9.	CTM E038		
10.	CTM E039		
11.	CTM E042E		
12.	CTM E043B		

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