## CABELEC® CA3839

## Polypropylene Copolymer

**Cabot Corporation** 

## Message:

CABELEC® 3839 is a static dissipative compound based on carbon black and a polypropylene copolymer. Its electrical and mechanical properties are permanent and are not dependent on atmospheric conditions. It has a good rigidity and can be easily processed on conventional molding equipment. The static dissipative nature of CABELEC 3839 provides products with a higher resistivity than usual conductive materials but ensures permanent static dissipation. It is therefore of interest in applications where slow discharge of static electricity is required.

Moreover, CABELEC 3839 absorbs very little water from the atmosphere in normal usage conditions, which is a significant asset for applications where a very low moisture pick-up is mandatory for a good surface aspect.

Suggested areas of applications are ordnance and ammunition works, mines, petroleum plants, electronics and other environments where freedom from the hazard of electrostatic discharge is an important condition.

General Information			
Additive	Carbon Black		
Features	Antistatic		
	Copolymer		
	High Rigidity		
	Low to No Water Absorption		
Uses	Electrical/Electronic Applications		
	Mining Applications		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity <sup>1</sup>	1.04	g/cm³	Internal Method
Melt Mass-Flow Rate (MFR) <sup>2</sup>			ISO 1133
230°C/10.0 kg	94	g/10 min	
230°C/2.16 kg	4.0	g/10 min	
230°C/5.0 kg	21	g/10 min	
Molding Shrinkage - Flow <sup>3</sup>	0.80 to 1.0	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness <sup>4</sup> (Shore D, 15 sec)	63		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress <sup>5</sup>			ISO 527-2
Yield	21.0	MPa	
Break	15.0	MPa	
Tensile Strain <sup>6</sup> (Break)	59	%	ISO 527-2
Flexural Modulus <sup>7</sup>	1200	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength <sup>8</sup> (23°C)	45	kJ/m²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature <sup>9</sup> (1.8 MPa, Unannealed)	47.0	°C	ISO 75-2/A
Vicat Softening Temperature <sup>10</sup>	150	°C	ISO 306/A
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity <sup>11</sup>	1.0E+6	ohms	IEC 60093
Volume Resistivity <sup>12</sup>	1.0E+4	ohms·cm	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	60.0	°C	
Drying Time	2.0 to 4.0	hr	
Rear Temperature	200	°C	
Middle Temperature	200	°C	
Front Temperature	200	°C	
Nozzle Temperature	220	°C	
Mold Temperature	30.0	°C	
Screw L/D Ratio	18.0:1.0		
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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