

CABELEC® CA3178

Polyamide 6

Cabot Corporation

Message:

CABELEC® 3178 is an electrically conductive compound based on conductive carbon black, dispersed in nylon 6. It has been formulated for injection moulding applications. It has been developed to give a balanced property profile with permanent electrical conductivity.

CABELEC® 3178 has been specially designed for packaging and electronic product handling applications where freedom from the hazard of electrostatic discharge is necessary. Examples of use are in handling of explosives, electronic components and pigments.

General Information			
Additive	Carbon Black		
Features	Electrically Conductive		
Uses	Electrical/Electronic Applications		
	Packaging		
Agency Ratings	EC 1907/2006 (REACH)		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity ¹	1.20	g/cm ³	Internal Method
Melt Mass-Flow Rate (MFR) ² (275°C/10.0 kg)	10	g/10 min	ISO 1133
Molding Shrinkage - Flow ³	1.5 to 2.0	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness ⁴ (Shore D, 15 sec)	78		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress ⁵			ISO 527-2
Yield	55.0	MPa	
Break	45.0	MPa	
Tensile Strain ⁶ (Break)	15	%	ISO 527-2
Flexural Modulus ⁷	2700	MPa	ISO 178
Flexural Stress ⁸	89.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-30°C	7.0	kJ/m ²	
23°C	12	kJ/m ²	
Notched Izod Impact Strength ⁹ (23°C)	15	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ¹⁰ (1.8 MPa, Unannealed)	66.0	°C	ISO 75-2/A
Vicat Softening Temperature ¹¹	215	°C	ISO 306/A

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ¹²	1.0E+3	ohms	Internal Method
Volume Resistivity ¹³	1.0E+2	ohms·cm	Internal Method
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.00 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Rear Temperature	220 to 275	°C	
Middle Temperature	220 to 275	°C	
Front Temperature	220 to 275	°C	
Nozzle Temperature	220 to 275	°C	
Mold Temperature	60.0	°C	
NOTE			
1.	CTM E023		
2.	CTM E005		
3.	CTM E047		
4.	CTM E023		
5.	CTM E041		
6.	CTM E041		
7.	CTM E040A		
8.	CTM E040B		
9.	CTM E044A		
10.	CTM E038		
11.	CTM E039		
12.	CTM E042E		
13.	CTM E043B		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

