CABELEC® CA4743

High Density Polyethylene

Cabot Corporation

Message:

CABELEC® 4743 is a conductive compound based on conductive carbon black dispersed in a modified high density polyethylene resin. Its electrical and mechanical properties are permanent and are not dependent on atmospheric conditions.
CABELEC® 4743 has been designed for injection moulding applications. It is particularly suitable for the injection moulding of large parts, for example, pallets. It is recommended for product handling applications where freedom from the hazard of electrostatic discharge is necessary, such as handling of explosive powders and liquids, pigments or electronic components.

General Information			
Features	Conductive		
Uses	Electrical/Electronic Applications Industrial Parts		
Agency Ratings	EC 1907/2006 (REACH)		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity [1]	1.15	g/cm³	Internal Method
Melt Mass-Flow Rate (MFR) [2]			ISO 1133
190°C/10.0 kg	37	g/10 min	
190°C/2.16 kg	3.0	g/10 min	
190°C/5.0 kg	12	g/10 min	
Molding Shrinkage - Flow [3]	1.0 to 2.0	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness [4] (Shore D, 15 sec)	59		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [5]			ISO 527-2
Yield	18.0	MPa	
Break	10.0	MPa	
Tensile Strain [6] (Break)	60	%	ISO 527-2
Flexural Modulus [7]	1300	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength [8] (23°C)	15	kJ/m²	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature [9] (1.8 MPa, Unannealed)	43.0	°C	ISO 75-2/A
Vicat Softening Temperature [10]	99.0	°C	ISO 306/A
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity [11]	8.0E+2	ohms	Internal Method
Volume Resistivity [12]	70	ohms·cm	Internal Method

Injection	Nominal Value	Unit
Drying Temperature	60.0	°C
Drying Time	2.0 to 4.0	hr
Rear Temperature	170 to 235	°C
Middle Temperature	170 to 235	°C
Front Temperature	170 to 235	°C
Nozzle Temperature	200 to 255	°C
Mold Temperature	40.0 to 50.0	°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

Recommended distributors for this material

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