CABELEC® CC6057

Polypropylene Copolymer

Cabot Corporation

Message:

CABELEC CC6057 conductive concentrate is an electrically conductive concentrate, made from carbon black and a polypropylene copolymer. The concentrate can be diluted at high levels depending on the processing conditions and the targeted specification for the electrical resistivity. Its electrical and mechanical properties are not dependent on atmospheric conditions.
Applications
CABELEC CC6057 conductive concentrate can be used in extrusion applications such as sheets and corrugated sheets for packaging electronics, where freedom from the hazard of electrostatic discharge is required. CABELEC CC6057 conductive concentrate can also be used for injection moulding applications such as pallets or boxes where it can be diluted at high rates with natural or even recycled polypropylene.

General Information	
Additive	Carbon Black
Features	Copolymer Electrically Conductive
Uses	Corrugated Sheet Electrical/Electronic Applications Media Packaging Packaging Pallets Sheet
Appearance	Black
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity [1]	1.13	g/cm³	Internal Method
Melt Mass-Flow Rate (MFR)			ISO 1133
230°C/10.0 kg	3.0	g/10 min	
230°C/21.6 kg	74	g/10 min	
230°C/5.0 kg	0.30	g/10 min	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ISO 527-2
Yield, Injection Molded [2]	26.5	MPa	
Yield, Injection Molded [3]	27.1	MPa	
Yield, Injection Molded [4]	27.4	MPa	
Tensile Strain			ISO 527-2
Break, Injection Molded [5]	250	%	
Break, Injection Molded [6]	180	%	

Break, Injection Molded [7]	120	%	
Flexural Modulus			ISO 178
Injection Molded [8]	1230	MPa	
Injection Molded [9]	1290	MPa	
Injection Molded [10]	1280	MPa	
Impact	**Nominal Value**	**Unit**	**Test Method**
Unnotched Izod Impact Strength			ISO 180
Injection Molded [11]	80	kJ/m²	
Injection Molded [12]	75	kJ/m²	
Injection Molded [13]	60	kJ/m²	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity			Internal Method
-- [14]	26	ohms	
0.400 mm [15]	1.3E+5	ohms	
0.400 mm [16]	5.6E+3	ohms	
0.400 mm [17]	5.7E+2	ohms	
Volume Resistivity [18]	1.2	ohms·cm	Internal Method
Injection	**Nominal Value**	**Unit**	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Nozzle Temperature	220	°C	
Processing (Melt) Temp	200 to 220	°C	
Mold Temperature	30.0	°C	
Extrusion	**Nominal Value**	**Unit**	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Cylinder Zone 1 Temp.	190 to 220	°C	
Cylinder Zone 2 Temp.	190 to 220	°C	
Cylinder Zone 3 Temp.	190 to 220	°C	
Cylinder Zone 4 Temp.	190 to 220	°C	
Cylinder Zone 5 Temp.	190 to 220	°C	
Melt Temperature	190 to 220	°C	
NOTE			
1.	CTM E023		
2.	Dilution 55% ppc		
3.	Dilution 50% ppc		
4.	Dilution 40% ppc		
5.	Dilution 55% ppc		
6.	Dilution 50% ppc		
7.	Dilution 40% ppc		
8.	Dilution 55% ppc		
9.	Dilution 50% ppc		

10.	Dilution 40% ppc
11.	Dilution 55% ppc
12.	Dilution 50% ppc
13.	Dilution 40% ppc
14.	CTM E042E
15.	Dilution 55% ppc, CTM E042D
16.	Dilution 50% ppc, CTM E042D
17.	Dilution 40% ppc, CTM E042D
18.	CTM E043B

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