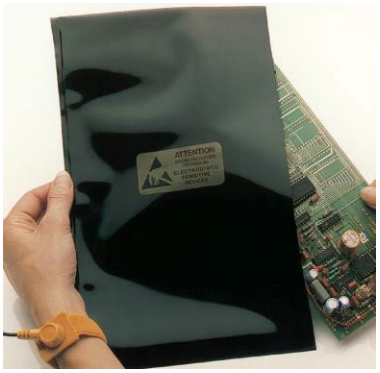
CONDUCTIVE COMPOUNDS AND CONCENTRATES

CABELEC® CA4918 CONDUCTIVE COMPOUND

Product highlights

CABELEC CA4918 electrically conductive compound is made from conductive carbon black dispersed in a modified low density polyethylene resin. Its electrical and mechanical properties are not impacted by normal atmospheric conditions.



Key applications

CABELEC CA4918 conductive compound is suitable for applications where it is desirable to mitigate the hazard of electrostatic discharge, such as the handling and packaging of explosive powders, pigments, and electronic components.

Processing

Pre-drying

CABELEC CA4918 conductive compound absorbs very little moisture from the atmosphere under normal storage and usage conditions. Pre-drying of the compound before processing can therefore be avoided in most cases. For critical applications, if the compound is stored outside, and/or used in climates with high relative humidity, it is advisable to pre-dry the material to achieve a good film quality. Typically, 2-4 hours in a dryer at 80°C is sufficient time to reduce the moisture content to an acceptable level.

Blown film extrusion

CABELEC CA4918 conductive compound can be processed on most types of extrusion equipment. Low shear conditions are required to achieve good electrical conductivity and mechanical properties. For optimal conductivity and good film quality, it is advisable to operate with moderate blow-up ratios and the highest processing temperatures defined by the manufacturing parameters.

As general guidance, extrusion temperatures of 180-200°C have been used successfully on blown film extrusion lines. Temperatures above 230°C should be avoided. To promote good electrical and mechanical properties of the material it is nevertheless strongly suggested to avoid high shear mixing elements.

The information given in this section should be used as a guide only as different equipment could need different conditions.

TYPICAL PROPERTIES			
PROPERTY	**TYPICAL VALUE**	**UNITS**	**TEST METHOD**
Density @23°C	1060	kg/m^3	ISO 1183
MFI (190°C/5 kg)	0.8	g/10 min	ISO 1133

CABELEC® CA4918 CONDUCTIVE COMPOUND

MFI (190°C/10 kg)	3.5	g/10 min	ISO 1133
Surface resistivity on 100 µm film	$<10^3$	Ohm/sq	IEC 61340-2-3
Tensile strength at break* on 100 µm film LD	20	MPa	ISO 527
Tensile strength at break* on 100 µm film TD	20	MPa	ISO 527
Tensile strength at yield* on 100 µm film LD	11	MPa	ISO 527
Tensile strength at yield* on 100 µm film TD	11	MPa	ISO 527
Elongation at break* on 100 µm film LD	580	%	ISO 527
Elongation at break* on 100 µm film TD	425	%	ISO 527
Elongation at yield* on 100 µm film LD	23	%	ISO 527
Elongation at yield* on 100 µm film TD	22	%	ISO 527
Trouser tear resistance on 50 µm film LD**	5	cN/µm	ASTM D1938
Trouser tear resistance on 50 µm film TD**	3	cN/µm	ASTM D1938
Elmendorf tear resistance on 100 µm film LD	21	cN/µm	ASTM D1922
Elmendorf tear resistance on 100 µm film TD	20	cN/µm	ASTM D1922

* 500 mm/min
** 250 mm/min
LD - longitudinal direction
TD - transverse direction
NB. No yield was observed. The values quoted are calculated for a theoretical yield at 15% offset.

The data in the table above are typical test values intended as guidance only and are not product specifications. Product specifications are available upon request from your Cabot representative.

Product form and logistics

- Product form: pellets
- Regional availability: global
- Packaging options: 25 kg bags

For information on product-specific storage conditions, please refer to the applicable Safety Data Sheet (SDS) available from your Cabot representative or at cabotcorp.com. The CABELEC name is a registered trademark of Cabot Corporation.

NORTH AMERICA
Cabot Plastics Canada
707 Pierre Tremblay Boulevard Saint-Jean-sur-Richelieu
QC, J2X 5G5
Canada
T +1 450 347 4371
F +1 450 347 9936

SOUTH AMERICA
Cabot Brasil Industria e Comercio Ltda.
Rua do Paraíso 148 - 5° andar
04103-000 São Paulo
Brazil
T +55 11 2144 6400
F +55 11 3253 0051

EUROPE
SIA Cabot Latvia
74A Gustava Zemgala gatve
LV- 1039 Riga
Latvia
T +371 670 50 900
F +371 670 50 985

MIDDLE EAST/AFRICA
Cabot Specialty Chemicals
Jebel Ali Free Zone
LOB 15, Office 424, Dubai
United Arab Emirates
T +971 4 8871 800
F +971 4 8871 801

ASIA PACIFIC
Cabot China Ltd.
558 Shuangbai Road
Minghang District
Shanghai 201108
China
T +86 21 5175 8800
F +86 21 6434 5532

JAPAN
Cabot Specialty Chemicals, Inc.
Sumitomo Chiba-Daimon Bldg, 3F
2-5-5 Shiba Daimon,
Minato-ku, Tokyo 105-0012
Japan
T +81 6820 0255
F +81 3 5425 4500

CABOT