

# **SPECIALTY CARBON BLACKS FOR PLASTICS**





## Performance and leadership in black plastics

Cabot Corporation is a global performance materials company and we strive to be our customers' commercial partner of choice. We have been a leading manufacturer of carbon black and other specialty chemicals for more than 130 years, and we have supplied additives to the plastics industry since its inception.

Our global reach enables us to work closely with customers to meet the highest standards for performance, quality and service. Our global production network and three applications development facilities provide our customers with global service capabilities as well as the latest technical innovations.

## Global reach

**We support customers around the world in our global production and applications development centers**

### ◆ North America

Canada  
Mexico  
United States

### ◆ South America

Argentina  
Brazil  
Colombia

### ◆ Europe, Middle East & Africa

Belgium  
Czech Republic  
France  
Germany  
Italy  
Latvia  
Norway  
Switzerland  
The Netherlands  
United Arab Emirates  
United Kingdom

### ◆ Asia Pacific

China  
India  
Indonesia  
Japan  
Korea  
Malaysia  
Singapore

With approximately 4,500 employees worldwide, we continue to create a diverse environment rooted in values and sustainability.

We operate 44 manufacturing sites in 21 countries, all with local management teams. We have a global footprint in order to serve our customers throughout the world.

## Our offerings for plastics

We offer specialty carbon blacks to improve the performance of plastics and extend their useful life. Industries served include automotive, wire and cable, pressure pipe, film and sheet and many others. We have experience in all processing technologies, including all advanced extrusion and molding methods. Our specialty carbon blacks for plastics have been formulated to meet application-specific needs and are manufactured to exacting standards. Equally important, our technical sales and service teams are available to work with you and provide additional product information and support to aid your selection of the best product for your specific application. Regardless of your application, our specialty carbon blacks provide differentiated performance and reliable quality.

### Our brands

We supply a diverse range of specialty carbon black products to meet performance and processability requirements across many industries and end uses. Offered in pellet and fluffy form, our long-established products for plastics include VULCAN®, ELFTEx® and BLACK PEARLS® specialty carbon blacks. While our products have performed successfully in plastic applications for more than 50 years and are top choices for the plastics industry, we continue to innovate and develop new products to drive our customers' product performance.



## Products for plastics applications

INDUSTRY / APPLICATION	KEY CB PERFORMANCE REQUIREMENTS	TYPICAL POLYMERS	SUITABLE PRODUCTS
<b>Plastic film and sheet applications</b>			
Packaging and lamination	Color / opacity Surface smoothness / quality	PE, copolymer PE	BLACK PEARLS® 4040, 160, 120 ELFTEX® 570
General purpose / utility	UV / weatherability Dispersibility		
<b>Agricultural film and pipe</b>			
Irrigation pipe and tape	UV / weatherability Microdispersion Surface smoothness Mechanical strength	PE, copolymer PE	BLACK PEARLS 4040, 160, 120 ELFTEX 570 VULCAN® 9A32
Mulch and silage film	UV / weatherability Opacity Mechanical strength		
<b>Geosynthetics</b>			
Geogrids	UV / weatherability	PE, copolymer PE	ELFTEX TP BLACK PEARLS 4040, 280
Geotextiles	Color / opacity		
Geomembranes	Dispersibility		
<b>Plastic pressure pipe</b>			
Pressure pipe	UV / weatherability Physical cleanliness (e.g., ash) Chemical cleanliness (e.g., sulfur) Dispersibility	PE	ELFTEX P100, TP
<b>Plastic pipe</b>			
Non-regulated and other pipe	UV / weatherability Color Dispersibility	PE, PP, PVC	BLACK PEARLS 4040, 280 ELFTEX 570
<b>Wire and cable</b>			
High voltage cable, semiconductive	Conductivity Surface smoothness Physical cleanliness (e.g., ash) Chemical cleanliness (e.g., sulfur)	EVA, EEA, EBA	VULCAN XC500
Medium voltage cable, semiconductive			VULCAN XC72, XC68, XC200
Conductive jacketing		PE	VULCAN XCmax™ 22
UV jacketing	UV / weatherability Color Dispersibility	PE, PVC	VULCAN 9A32 ELFTEX TP ELFTEX 570
<b>Plastic molded parts</b>			
Molded parts for consumer products	Color Surface smoothness Dispersibility	PP, ABS, PC/ABS blends, PA, POM	BLACK PEARLS 630 800, 450A111, 4840
Molded parts for industrial applications			

INDUSTRY / APPLICATION	KEY CB PERFORMANCE REQUIREMENTS	TYPICAL POLYMERS	SUITABLE PRODUCTS
<b>Food contact applications in plastics</b>			
Molded and extruded food contact applications	PAH levels Chemical cleanliness (e.g., sulfur) Physical cleanliness (e.g., ash) Color / opacity	PE, PP, PET, PS	BLACK PEARLS 4350, 4750 <sup>1,2</sup> Other regions: additional products
<b>Automotive parts</b>			
Interior	Color UV / weatherability Surface smoothness / quality Mechanical strength	PP, ABS, PC/ABS blends, PA	BLACK PEARLS 900, 800, 4840, 717 ELFTEX 570 VULCAN 9A32
Exterior			
Under the hood	Dispersibility	PA, POM, PP	BLACK PEARLS 1300, 800 ELFTEX 570
Fuel systems (conductive/ESD)	Conductivity		VULCAN XCmax 22, XC72, XC605
<b>Synthetic fiber and textile fabrics</b>			
Apparel	Physical cleanliness (e.g., ash) Color Dispersibility Filterability	PET, PA, PP	BLACK PEARLS 5560, 4560i, 3560
Home / carpets			
Technical, load-bearing (e.g., nylon)	Color Surface smoothness / quality Mechanical strength		BLACK PEARLS 5560, 4560i, 3560 ELFTEX 570
<b>Conductive and ESD applications</b>			
<b>Electronic and electrical</b>			
IC carrier tapes and trays		PS, PS/PPO blends, PC	
ESD films		LDPE, LLDPE, EVA	
ESD corrugated boards		PS, PS/PPO blends	
ESD boxes		PP	
ESD foams (associated polymer is PP)	Conductivity Mechanical strength	PPO, PES	VULCAN XCmax 22, XC72, XC605, XC305
<b>Safety and other</b>	Dispersibility Chemical cleanliness (e.g., sulfur)		
Containers		PP, HDPE	
Fiber / slit tape		PP	
Conveying		PE, PP	
Industrial and consumer conductive moldings		ABS, PP, PS, PA, PE	
<b>Automotive</b>			
Fuel systems		PA, POM, PP, PE	

1. Information current at publication. For assurance that a carbon black product can be used in food contact applications, a Cabot issued food contact certification statement is required. Please contact your local Cabot representative.

2. This product meets U.S. Food and Drug Administration (FDA) requirements (21 CFR 178.3297) for contact with food when used as a colorant in polymers.

## Relative product performance

Our specialty carbon blacks products provide customers with numerous performance and processing benefits. Among these benefits, color, UV / weatherability and conductive performance are the primary selection drivers. Relative color and UV/weatherability product performance for select products are shown in Figures 1 and 2, respectively.



Figure 1:  
Color performance for select specialty carbon blacks

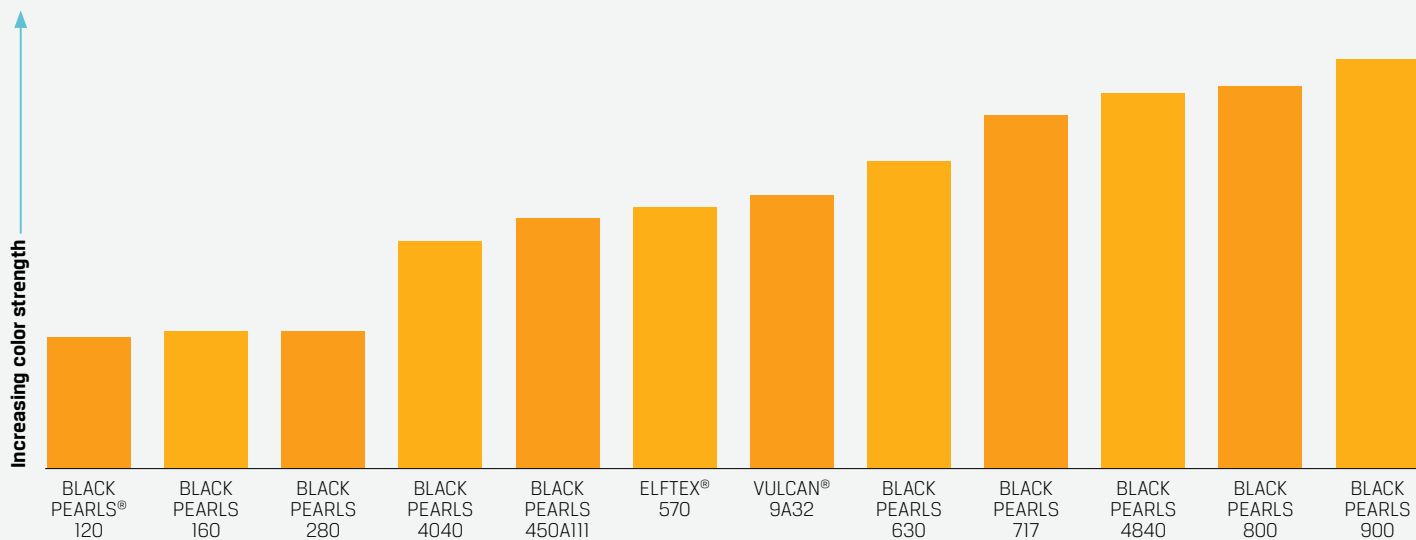
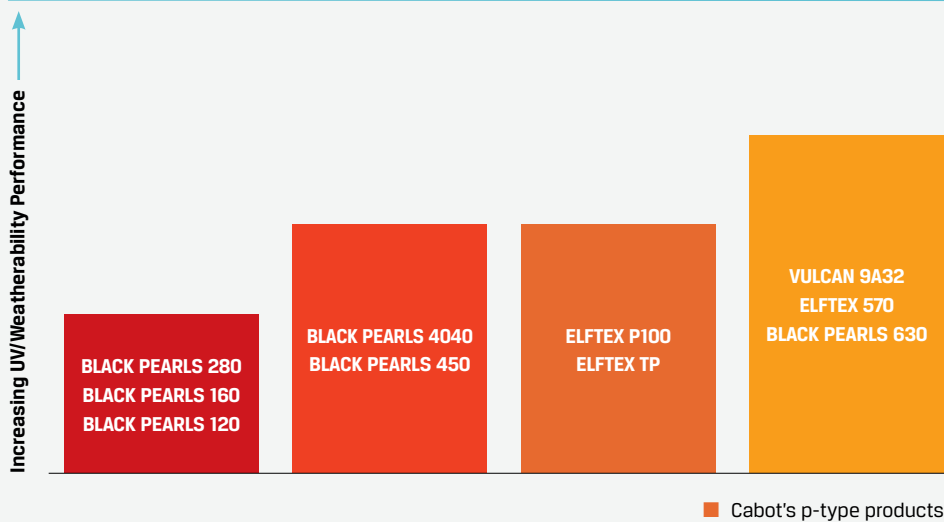


Figure 2:  
UV / weatherability performance for select specialty carbon blacks



For further information to help you select the best product for your specific application, please contact your Cabot representative.



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## Additional references

This Global Selection Guide provides high-level information about our specialty carbon black product offerings.

For application-specific products, please refer to our respective literature or contact your Cabot representative.

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### NORTH AMERICA

Cabot Corporation Business  
and Technology Center  
157 Concord Road  
P.O. Box 7001  
Billerica, MA 01821 - USA  
Technical service  
T +1 800 462 2313  
Customer service  
T +1 678 297 1300  
F +1 678 297 1245

### SOUTH AMERICA

Cabot Brasil Industria  
e Comercio Ltda.  
Rua do Paraiso 148 - 5 andar  
04103-000 Sao Paulo,  
Brazil  
T +55 11 2144 6400  
F +55 11 3253 0051

### EUROPE

Cabot Specialty Chemicals  
Coordination Center  
SIA Cabot Latvia  
101 Mukusalas Street  
Riga, LV-1004, Latvia  
T +371 6705 0700  
F +371 6705 0985

### MIDDLE EAST & AFRICA

Cabot Dubai  
P.O. Box 17894  
Jebel Ali Free Zone  
LOB 15, Office 424  
Dubai  
United Arab Emirates  
T +371 6705 0700  
F +371 6705 0985

### ASIA PACIFIC

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

### JAPAN

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

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