# SELECTION GUIDE

## SPECIALTY CARBON BLACKS

## CARBON BLACKS FOR COATINGS

All non-EMPEROR products are also available in pellet form. Pellets often require a premix step to achieve complete dispersion. Additional products are available for specific applications. For details, please contact your regional Cabot technical support representative.

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| **HIGH COLOR BLACKS** | Applications where very high jetness is the primary performance requirement, especially automotive, wood and electronics coatings. | - Automotive basecoats  
- Wood coatings  
- Electronic coatings  
- Powder coatings | EMPEROR® 2000  
EMPORER 1800  
EMPORER 1600  
MONARCH® 1300  
EMPORER 1200 | Horizontal mill  
Vertical mill  
Sand mill  
High speed disperser | Extremely high jetness, designed for ease of dispersion in waterbased or polar solvent formulations. High jetness, designed for ease of dispersion in waterbased or polar solvent formulations. High jetness and very easy to disperse in solvent based formulations. High jetness pigment, designed for use in both water and solvent formulations. Designed for ease of dispersion and excellent blue undertone in solvent based formulations. |
| **MEDIUM COLOR BLACKS** | Applications where jetness dispersability and ease of use are primary drivers, especially powder coatings and exterior enamels. | - Powder coatings  
- Exterior enamels  
- Industrial coatings | MONARCH 1000  
MONARCH 800  
MONARCH 700 | | Medium high jetness in masstone applications. Medium color carbon black with good balance of color strength and dispersability. Easy to disperse medium color black for masstone and tint applications. |
| **LOW VISCOSITY BLACKS** | Applications where a basic black color is required with very low viscosity, especially industrial coatings. | - Industrial coatings  
- General purpose coatings | MOGUL® L  
REGAL® 400R  
REGAL 660R  
REGAL 570  
REGAL 330R | Horizontal mill  
Vertical mill  
Sand mill  
High speed disperser | Excellent dispersion and stability in coatings formulations. Good stability and tinting strength. High tinting strength and low viscosity. All purpose grade for use in both masstone and tinting formulations. Easy to disperse low viscosity carbon black. |
| **MULTI-PURPOSE BLACKS** | Applications where a basic black color is required, especially in industrial coatings. | - Industrial coatings  
- General purpose coatings | REGAL 660R  
MONARCH 570  
MONARCH 280  
MONARCH 120 | Horizontal mill  
Vertical mill  
Sand mill  
High speed disperser | Excellent blue undertone and high tint strength with 10%. Easier to process than MONARCH 280 carbon black. |
| **TINTING BLACKS** | Used as tinting blacks in a wide variety of applications, where blue undertone and tinting strength are primary performance requirements. | - Architectural coatings  
- Automotive coatings  
- Industrial coatings | MONARCH 280  
MONARCH 120 | N/A, tinting only  
N/A, conductive coatings only | |
| **CONDUCTIVE BLACKS** | Used as a conductive pigment, especially in static dissipative coatings. | - Static dissipative coatings  
- Plastic coatings | VULCAN® XC72R | N/A, conductive coatings only | Fluffy conductive carbon black is very easy to work with in coatings formulations. |

- Acceptable milling equipment  
- May be sufficient, dependent on dispersant selection and other factors  
- May not disperse carbon black to <10 microns
**Performance Overview**

**Color performance**

In most coatings applications, the primary function of the carbon black is as a pigment.

In **masstone applications** where deep black color is desired, higher color carbon blacks are more appropriate.

In **tinting applications**, the selection of an appropriate grade is often based on formulation and processing characteristics.

**Blue undertone**, an important characteristic in both masstone and tinting applications, is heavily impacted by dispersant selection, compatibility with the resin and processing conditions.

**Ease of use**

Higher color carbon blacks generally have higher surface area. This higher surface area drives higher required dispersion energy, dispersant loading and other processing requirements.

A carbon black that is well dispersed will provide deeper color than the same material when poorly dispersed. Using an easier to disperse carbon black can improve color performance in systems where relatively low dispersion energy and lower dispersant loading is applied.

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**CARBON BLACKS FOR COATINGS**

**EMPORER® 2000**
- Carbon black
- For waterbased formulations

**EMPORER® 1600**
- Carbon black
- For waterbased formulations

**EMPORER 1800**
- Carbon black
- For solventbased formulations

**MONARCH® 1300**
- Carbon black
- For solventbased formulations

**MONARCH 1000**
- Carbon black

**MONARCH 800**
- Carbon black

**MONARCH 700**
- Carbon black

**REGAL® 660R**
- Carbon black

**REGAL 570**
- Carbon black

**REGAL 330R**
- Carbon black

**MOGUL**
- Carbon black

**MONARCH 280**
- Carbon black

**MONARCH 120**
- Carbon black

**EMPEROR 1800**
- Carbon black
- For waterbased formulations

**EMPEROR 1600**
- Carbon black
- For waterbased formulations

**EMPEROR 1200**
- Carbon black
- For solventbased formulations

**MONARCH 1300**
- Carbon black
- For solventbased formulations

**MONARCH 1200**
- Carbon black
- For solventbased formulations

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