CABOT

SPECIALTY CARBON BLACKS

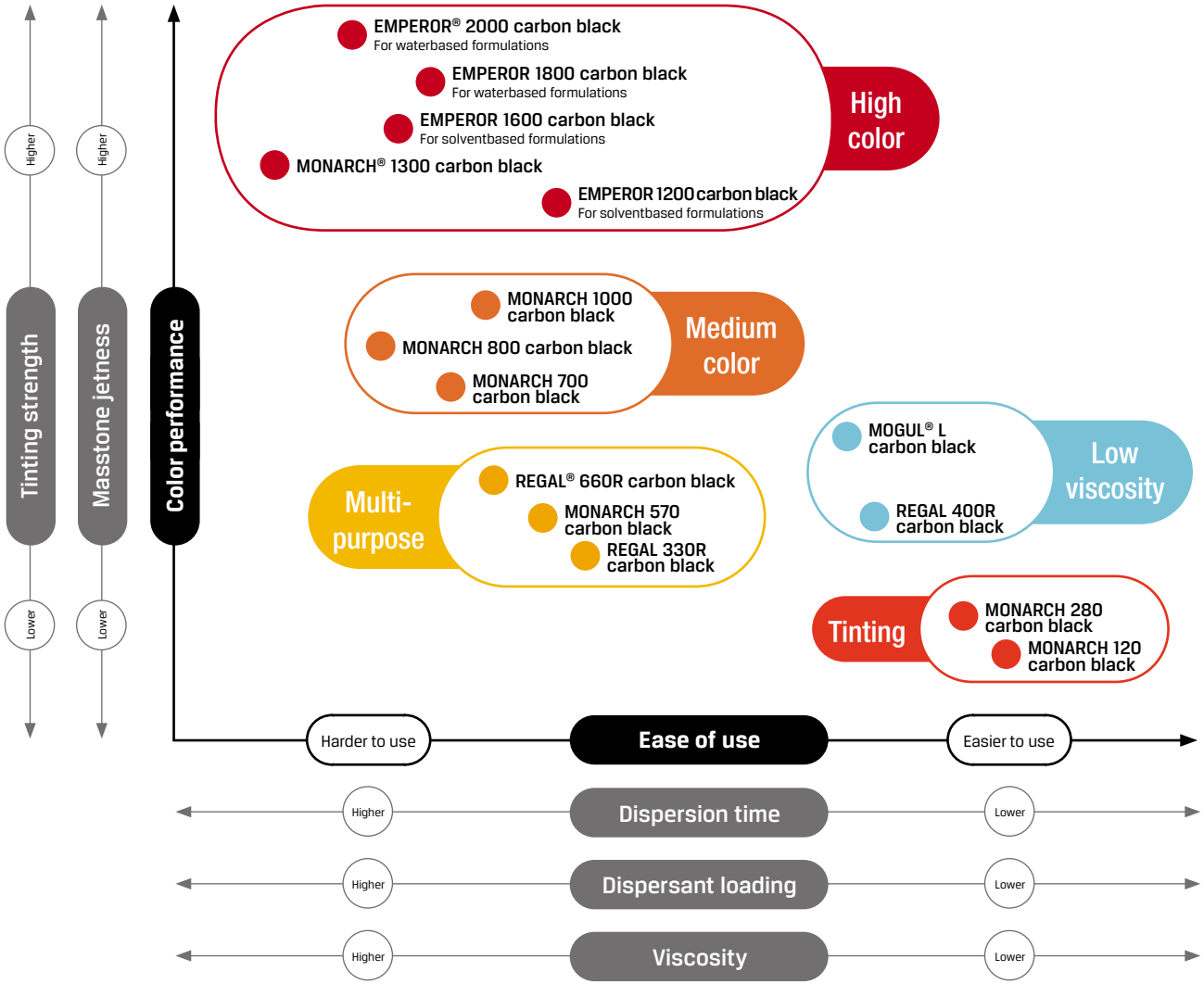
SELECTION GUIDE

CARBON BLACKS FOR COATINGS

Material category	Product performance requirements	Lead applications	Carbon black products	Jetness	Required milling equipment (to achieve <10 microns)				Additional information
					Horizontal mill	Vertical mill	Sand mill	High speed disperser	
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	HIGHEST	●	◐	◐	○	Extremely high jetness, designed for ease of dispersion in waterbased or polar solvent formulations.
			EMPEROR 1800						High jetness, designed for ease of dispersion in waterbased or polar solvent formulations.
			EMPEROR 1600						High jetness and very easy to disperse in solvent based formulations.
			MONARCH® 1300						High jetness pigment, designed for use in both water and solvent formulations.
			EMPEROR 1200						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		●	●	◐	○	Medium high jetness in masstone applications.
			MONARCH 800						Medium color carbon black with good balance of color strength and dispersability.
			MONARCH 700						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		●	●	●	◐	Excellent dispersion and stability in coatings formulations.
			REGAL® 400R						Good stability and tinting strength.
MULTI-PURPOSE BLACKS	Applications where a basic black color is required, especially in industrial coatings.	- Industrial coatings - General purpose coatings	REGAL 660R		●	●	●	●	High tinting strength and low viscosity.
			MONARCH 570						All purpose grade for use in both masstone and tinting formulations.
			REGAL 330R	LOWEST					Easy to disperse low viscosity 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	N/A, tinting only	●	●	●	●	Excellent blue undertone and high tint strength with TiO_2.
			MONARCH 120						Easier to process than MONARCH 280 carbon black.
CONDUCTIVE BLACKS	Used as a conductive pigment, especially in static dissipative coatings.	- Static dissapative 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

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.



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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