

CARBON BLACKS



CABOT

creating what matters

MOGUL® H Black Pigment for Use in a Wide Range of Formulations



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Cabot has developed Mogul H to meet the performance requirements in a range of applications. Its strong color performance and flexibility for use in multiple systems make it a particularly effective choice for customers who need a pigment for use in multiple formulations.

Design of the product has been optimized to provide balanced performance on the following 4 critical performance criteria.

- **Jetness:**

Jetness is the primary measure of color strength for black pigments. It is a measure of the total visible light absorbed by an object. The unit for measurement of jetness (L) refers to the black/white dimension of the 3-dimensional CIE color space.

- **Blue Tone:**

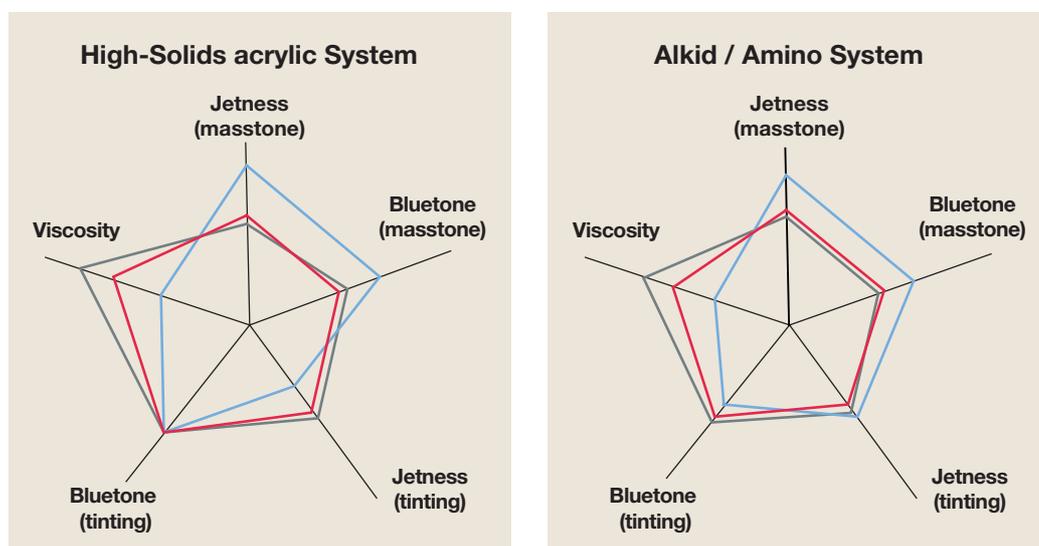
Undertone measurements quantify the color balance of an object. The CIE color space defines both a blue/yellow balance and a red/green balance. Because bluetone is a critical requirement for most black color applications, we report here the b-value undertone measurements.

- **Tinting Strength:**

A measure of how effectively a black pigment can be used to tint (as a secondary pigment) other colors. Reported here as jetness when combined with white pigment (TiO₂) in a fixed ratio.

- **Viscosity:**

A measure of system viscosity at a fixed pigment loading.



Performance improves from chart centre

Performance evaluation

The performance of MOGUL H has been evaluated in 2 common coatings systems.

Systems used for performance evaluations:

- High solids acrylic coating system
- Alkyd/amino coating system

■ Formulation Description

High Solids Acrylic

- Acrylic Solution
 - 53% acrylic high solids resin mixed with 47% aromatic 100
- Millbase
 - 15% carbon black and 85% acrylic solution; ball mill
- Masstone Letdown Solution
 - 76.5% of acrylic high solids resin mixed with
 - 15.5% cymel 325 melamine formaldehyde cross linking agent
 - 8% aromatic 100
- Finish Formulation
 - 5 g of millbase and 22.5 g of mass tone letdown solution
 - therefore 2.73% carbon black loading

Alkyd/Amino

- Alkyd/amino clear base
 - 49.8% total resin solid (70% solid short oil alkyd resin & 30% solid melamine) in aromatic hydrocarbon/glycol/alcohol combination
- Carbon black concentrate
 - 25% carbon black dispersed in aldehyde resin and high polymeric dispersant, shaker - zirconium beads
- Finish Formulation
 - 8% carbon black concentrate in 92% alkyd/amino clear base (2% carbon black loading in finish formulation).

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