

## TPK5315 AQUEOUS BLACK DISPERSION FOR DISPLAY MATERIALS

### Product Highlights

Cabot's aqueous carbon black dispersion is a solution for applying a unique black pigment to various display components and achieving equivalent or improved light shielding and electrical resistivity performance relative to Cabot's other carbon blacks for electronic display applications.

This aqueous black dispersion can be utilized to form films for light-guiding materials and in electrically resistive films, light control films, optoelectronic applications, and applications where it is desirable to achieve black color while limiting conductivity.



### Product Features

- ◆ The carbon black dispersion is electrostatically stabilized. It does not contain any small molecule or polymer dispersants.
- ◆ The carbon black particles are negatively charged due to covalently attached functional groups which are ionized in water. The counterion is sodium.
- ◆ The carbon black particles are designed to have low structure (close to spherical particle shape) for resistivity performance and do not cause significant increase of dispersion viscosity.

### Application Information

TPK5315 aqueous carbon black dispersion is suitable for thin film formation via standard techniques such as immersion, spin coating, spray coating, electromagnetic deposition, layer-by-layer deposition, lithography, etc.

It does not contain any surfactants or dispersants that would migrate to the surface of the film and possibly cause defects or inhibit adhesion of subsequent layers.

Because the functional group of TPK5315 aqueous carbon black dispersion is covalently attached, the stabilizing groups are not in equilibrium with medium as in traditional stabilized pigment dispersions.

TYPICAL PROPERTIES		
PROPERTY	VALUE	TEST METHOD
Carbon Black contents	30 wt%	CICTM – 1007*
pH	5.3	CICTM – 1008*

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Viscosity	2 – 4 cP	CICTM – 1009*
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\*Tests are performed according to Cabot Test Methods.

The data in the table above are typical test values intended as guidance only; they are not product specifications. Product specifications may be obtained from your local Cabot representative.

## Product Form and Logistics

- ◆ Product form : Aqueous dispersion
- ◆ Packaging options : 200 kg drums

## Other Products for Display Applications

Product	Designed Role in Portfolio
TPK1099R	Good light shielding for use in lower resistivity application with minimal impact to viscosity
TPK1437R	Good light shielding for use in lower resistivity application to meet more stringent resistivity requirement
TPK1104R	Good light shielding performance for use in lower resistivity applications with improved dispersibility to meet more stringent requirement on photoresist line shape development
TPK1227R	Percolates at higher pigment concentrations providing excellent light shielding while meeting the most stringent resistivity requirements

For more information about Cabot’s low structure carbon blacks for waterborne and solvent-based systems, contact your local Cabot sales team.

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](http://cabotcorp.com).

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