

## BYK-ET 3032

Aqueous wetting and dispersing additive for aqueous ceramic and carbon slurries to decrease the water uptake of prepared separator or electrode coatings of Li-ion cells.

### Product Data

#### Composition

Solution of a modified styrene-maleic acid copolymer

#### Typical Properties

The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Density (20 °C):	1.07 g/ml
Solvents:	Water
Non-volatile matter (10 min., 150 °C):	40 %
Amine value:	20 mg KOH/g
Acid value:	20 mg KOH/g
Electrochemical stability:	0.1 V to 4.8 V (vs. Li/Li <sup>+</sup> )

#### Storage and Transportation

Temperature sensitive. To be stored and transported between 5 °C and 40 °C. Separation or turbidity may occur. Mix well before use.

### Applications

#### Energy Storage

##### Special Features and Benefits

The stabilizing effect of BYK-ET 3032 shortens the dispersion process of alumina/boehmite and conductive additives (e.g. carbon black, Ketjenblack®, carbon nanotubes, etc.). Adding BYK-ET 3032 achieves better stabilization of the particles, leading to reduced viscosity of the slurry compared to standard systems without dispersant. BYK-ET 3032 facilitates the formulation of separator or electrode coating slurries for Li-ion cells with a higher solid content. The higher solid content in turn accelerates the drying process and improves the productivity of the separator or electrode manufacturing. BYK-ET 3032 is hydrophobic and can decrease the water uptake into battery cells compared to hydrophilic wetting and dispersing additives. It also contributes to better battery performance in general.

### Recommended Levels

Amount of additive (as supplied) based upon:

Alumina/boehmite: 0.5-1.5 %

Carbon black/Ketjenblack®/CNT/graphene: 5-50 %

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

### Incorporation and Processing Instructions

For optimum performance, the additive must be incorporated into the mill base before the addition of other particles. The suitable dispersion time of the slurry is determined by measuring the particle size development over the dispersion time.



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This issue replaces all previous versions.