BYK-ET 3034

Solvent-free wetting and dispersing additive for aqueous and solvent-borne concentrates of electrically conductive carbons and for the formulation of highly filled electrode slurries of Li-ion cells

Product Data

Composition
Styrene-maleic anhydride copolymer

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

Density (20 °C):	1.10 g/ml
Non-volatile matter (30 min., 150 °C):	> 97.0 %
Amine value:	18 mg KOH/g
Acid value:	8 mg KOH/g
Electrochemical stability:	0.1 V to 4.8 V (vs. Li/Li^+)

Applications

Energy Storage

Special Features and Benefits
The stabilizing effect of BYK-ET 3034 shortens the dispersion process of carbon black and other conductive carbons (e.g. Ketjenblack®, carbon nanotubes, etc.). Adding BYK-ET 3034 achieves better stabilization of the particles, leading to reduced viscosity of the slurry compared to standard systems without dispersant. BYK-ET 3034 facilitates the formulation of electrode 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 electrode manufacturing.

Recommended Levels
Amount of additive (as supplied) based upon:

Carbon nanotubes (CNT):	15-50 %
Carbon black:	5-25 %

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

Incorporation and Processing Instructions
BYK-ET 3034 should first be mixed with the solvent/water. Then the carbons should be added and homogeneously mixed in. The measurement of dispersion quality in terms of particle size and viscosity is useful for judging whether the dispersant is the right choice for the system.

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Data Sheet
Issue 12/2021

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