BYK-ET 3004

Solvent-free wetting and dispersing additive for aqueous and solvent-borne formulations of highly filled electrode slurries and for dispersing ceramic materials for separator coatings of Li-ion cells.

Product Data

Composition
Alkylol ammonium salt of a copolymer with acidic groups

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

Density (20 °C):	1.08 g/ml
Non-volatile matter (10 min., 150 °C):	80 %
Amine value:	94 mg KOH/g
Acid value:	94 mg KOH/g
Electrochemical stability:	0.1 V to 4.8 V (vs. Li/Li^+)

Storage and Transportation
Mix well before use. Separation or turbidity may occur. Heat to 30-40 °C and stir.

Applications

Energy Storage

Special Features and Benefits
The addition of BYK-ET 3004 into cathode slurries leads to a distinct reduction in viscosity due to steric stabilization. This improves the flow characteristics of the slurries and makes higher solid contents possible. The acidic copolymer shows high affinity towards different oxide- or phosphate-based cathode materials. Similarly, ceramic materials like alumina are dispersed well in both aqueous and solvent-borne separator coatings.

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

Cathode slurry:	0.2-2 %
Ceramic materials:	0.5-2 %

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 3004 should be added to the solvent and binder first 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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