

BYK-ET 3003

Solvent-free wetting and dispersing additive for the stabilization of inorganic active materials in highly filled aqueous and solvent-borne cathode electrode slurries for Li-ion cells.

Product Data

Composition

Phosphoric acid ester

Typical Properties

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

Density (20 °C):	1.16 g/ml
Non-volatile matter (10 min., 150 °C):	95 %
Acid value:	129 mg KOH/g
Electrochemical stability:	0.1 V to 4.8 V (vs. Li/Li ⁺)

Storage and Transportation

Mix well before use. Separation and turbidity may occur. Heat to 30-40 °C and stir.
The product should be stored in closed rooms and should not be pre-diluted before storage.

Applications

Energy Storage

Special Features and Benefits

The addition of BYK-ET 3003 to cathode slurries leads to a distinct reduction in viscosity due to steric stabilization. In this way, the flow characteristics of the slurries are improved and higher solid contents are possible. The acidic copolymer shows high affinity towards different oxide- or phosphate-based cathode materials.

Recommended Levels

Amount of additive (as supplied) based upon:

Cathode electrode slurry: 0.2-2 %

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 3003 should be added to the solvent and binder first and homogeneously mixed in.
To judge if the dispersant is the right choice for the system, the measurement of dispersion quality in terms of particle size and viscosity development is useful.



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This issue replaces all previous versions.