

BYK-ET 3002

Wetting and dispersing additive for solvent-borne concentrates of electrically conductive carbons and for the formulation of highly filled electrode slurries of Li-ion cells.

Product data

Composition

Solution of polyether-modified styrene-maleic anhydride copolymer and vinylpolymer

Typical properties

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

Density (20 °C):	1.09 g/ml
Non-volatile matter (20 min, 175 °C):	42.5 %
Solvent:	N-methylpyrrolidone
Acid value:	4.3 mg KOH/g
Amine value:	5.1 mg KOH/g
Electrochemical stability (vs. Li/Li ⁺):	0.1-4.8 V

Storage and transportation

Product shelf life in unopened original packaging: 24 months

Separation or turbidity may occur at temperatures below 5 °C. Warm to 20 °C and stir.

Applications

Energy storage

Special features and benefits

The stabilizing effect of BYK-ET 3002 shortens the dispersion process of carbon black and other conductive carbons (e.g. Ketjenblack®, carbon nanotubes, etc.). Adding BYK-ET 3002 achieves better stabilization of the particles, leading to reduced viscosity of the slurry compared to standard systems without dispersant. BYK-ET 3002 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:

Conductive carbons (carbon black/Ketjenblack®/CNT/graphene): 5-50 %

Active material: 0.5-2 %

The above recommended levels can be used for orientation. The optimum dosage should be determined by application-related test series.

Incorporation and processing instructions

BYK-ET 3002 should first be mixed with the solvent. Then the carbons should be added and homogeneously mixed in. The suitable dispersion time of the slurry is determined by measuring the particle size development over the dispersion time. The volume resistivity of the electrode coating should also be measured over the dispersion time.



Your local
contact

BYK-Chemie GmbH

Abelstraße 45
46483 Wesel
Germany
Tel +49 281 670-0
info@byk.com
www.byk.com



Download
our app:
byk.com/app

ANTI-TERRA®, AQUACER®, AQUAMAT®, AQUATIX®, BENTOLITE®, BYK®, BYK-AQUAGEL®, BYK-DYNWET®, BYK-MAX®, BYK-SILCLEAN®, BYKANOL®, BYKCARE®, BYKETOL®, BYKJET®, BYKONITE®, BYKOPLAST®, BYKUMEN®, CARBOBYK®, CERACOL®, CERAFK®, CERAFLOUR®, CERAMAT®, CERATIX®, CLAYTONE®, CLOISITE®, DISPERBYK®, DISPERPLAST®, FULACOLOR®, FULCAT®, GARAMITE®, GELWHITE®, HORDAMER®, LACTIMON®, LAPONITE®, NANOBYPK®, OPTIBENT®, OPTIGEL®, PURABYPK®, RECYCLOBYPK®, RHEOBYPK®, SCONA®, SILBYPK®, TIXOGEL® and VISCOBYPK® are registered trademarks of the BYK group.

The information contained herein is based on our current knowledge and experience. No warranties, guarantees and/or assurances of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding any products mentioned herein and data or information set forth, or that such products, data or information may be used without infringing intellectual property rights of third parties. Any information about suitability, use or application of the products is non-binding and does not constitute a commitment regarding the products' properties, use or application. Contractual terms and conditions, in particular agreed product specifications, always take precedence. We recommend that you test our products in preliminary trials to determine their suitability for your intended purpose prior to use. We reserve the right to make any changes and to update the information herein without notice.