

Conductive Binder for Cathode and Anode electrodes

CB Series Outlines

This is composed by Polyvinylidene fluoride polymerized with Ionic Liquid. It is available to make electrodes having an ideal conductive network with strong enough bonding and elastic adhesive properties to obtain a close-packed structure by a proper mixing with conductive agents.



Products:

Cathode use

Product Name	Grade
PIOXCEL CBC5010FP	Standard
PIOXCEL CBC5030FP	Hi-dispersion (*)

Anode use (solvent application)

Product Name	Grade
PIOXCEL CBA8150FP	Standard
PIOXCEL CBA8130FP	Hi-dispersion (*)

(*) This grade is applicable for close-packed structure to enhance dispersible effect of conductive agent.

Properties

Cathode use

Electrode	Product Name	Grade
LCO, NCM	PIOXCEL CBC5010FP	Normal-dispersion
NCM, NCA, LFP	PIOXCEL CBC5030FP	Close-packed form

Anode use (solvent application)

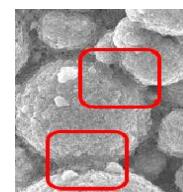
Electrode	Product Name	Grade
Graphite	PIOXCEL CBA8150FP	Normal-dispersion
LTO, Si-C	PIOXCEL CBA8130FP	Close-packed form



PIOXCEL CBC5030FP High Dispersion Powder form

Binding structure Characteristic data

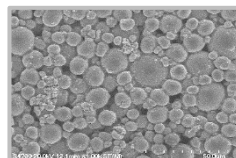
Specific bonding structure as pedestal adhesion form



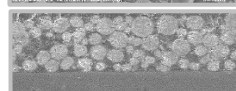
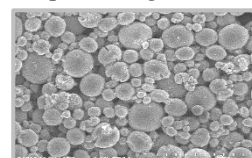
Close-packed Electrodes(SEM photos)

CBC binder in use
Close-packed structure

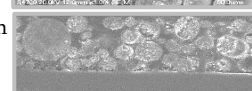
Conventional PVdF binder in use hard and lump bonding form



Interface SEM



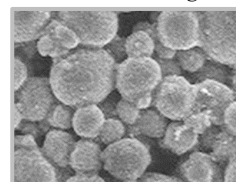
Cross section SEM



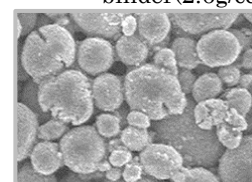
Flexibility adhesion (Press density)

CB Binder (2.8g/cc)

Conventional PVdF binder(2.6g/cc)



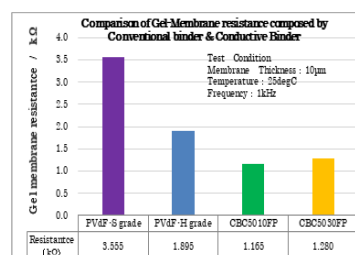
No cracks and broken by the elastic bonding property



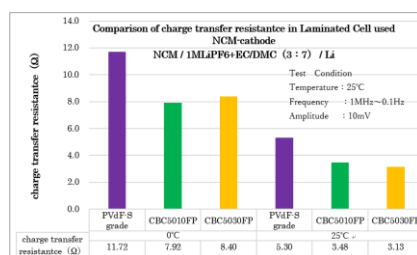
Many cracks and broken from hard bonding property

Performance Data in Cathode case *Achieve same performance in half volume with CB Binder!!*

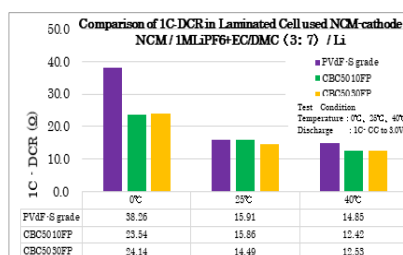
1. Gel membrane resistance



2. Charge Transfer property



3. IR drop property



1kg craft paper bag



25kg craft paper drum