Daikin VDF Based LiB Electrode Binder Materials

Daikin VDF Copolymer (Vinylidene Fluoride) based Lithium Ion Battery (LiB) electrode binder materials are a new generation of polymers specially formulated to meet the increasing demands of next generation LiB's.

Daikin is one of the largest fluoro-polymer manufacturers in the world. Utilizing its broad fluorpolymer chemistry, Daikin developed these fluoropolymers so that LiB manufacturers can build cathode constructions that will meet the demanding needs of next generation LiB's.

VW750 is a unique VDF copolymer which offers LiB manufacturers the ability to increase electrode densities, compared to PVDF, due to its more flexible properties. Higher electrode densities allows the LiB manufacturer to create cells with higher energy and power densities, critical properties for next generation battery systems. VW750 also delivers lower electrode swell at elevated temperatures and higher peel strength than PVDF. All of these performance improvements are critical to LiB manufacturers as they design cells with improved safety, life cycle, energy density, and higher voltage.

Daikin ... Doing More with Less

Features

- Patented chemistries vital to LiB developments
- VW750—Lower elastic modulus polymers than PVDF
- VW750—Higher fluorine content
- R&D capabilities in North America and Asia

Benefits

- Critical for improved life cycle, higher voltage, and higher energy density
- Resists cracking and premature warranty period failure
- More chemically resistant at elevated temperatures
- Technical support available globally to address any unique formulation requests

Performance

	Test Procedure	**VW750** PVdF Copolymer
Type		Powder
Melting Point (°c)	DCS	169～170
Molecular Weight *[Mw]*	GPC	8.0～9.5×10^5
Tensile Modulus	D638	650～750 Mpa
Solution Viscosity	B-type viscometer, 25°C	NMP 8wt% 1700～2300 mPa's

Manufacturing Capabilities

All Daikin binder resins are available for sampling and are supplied in powder form.
Contact your local Daikin sales representative for details.