KYNAR®

Kynar® PVDF Cathode Binder >25 years of Proven Track Record

Electrode binder material choice is paramount to producing high performance lithium ion batteries. The Kynar® HSV series is a range of PVDF grades providing **high adhesion to aluminum foil and electrode cohesion, electrode flexibility, controlled swelling in electrolyte, and electrochemical stability up to 5V.**

NMP-BASED CATHODE MANUFACTURING PROCESS WITH KYNAR® PVDF BINDER

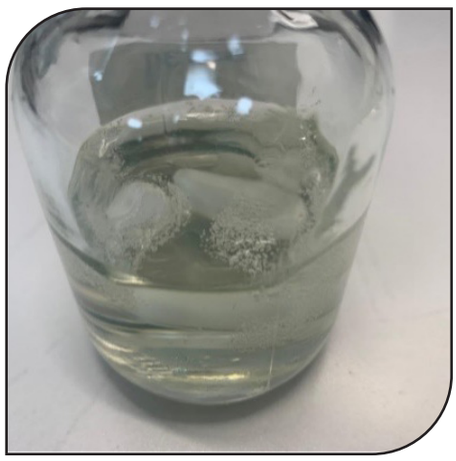
Mixing KYNAR®

Coating

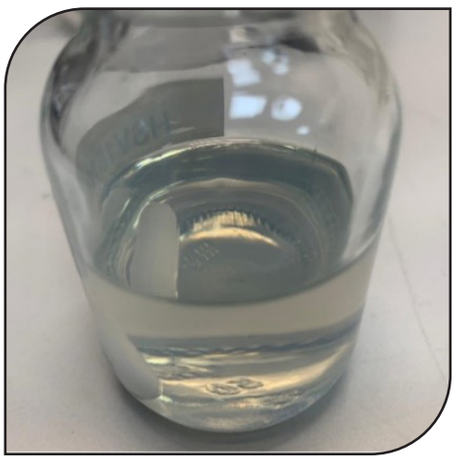
Drying

Calendaring

Kynar® PVDF resins have exceptional solubility in organic solvents because they are produced via an emulsion polymerization process, which inherently yields a finer powder particle than a suspension polymerization process. The smaller particle size and higher surface area results in faster dissolution in NMP, meaning lower production costs.



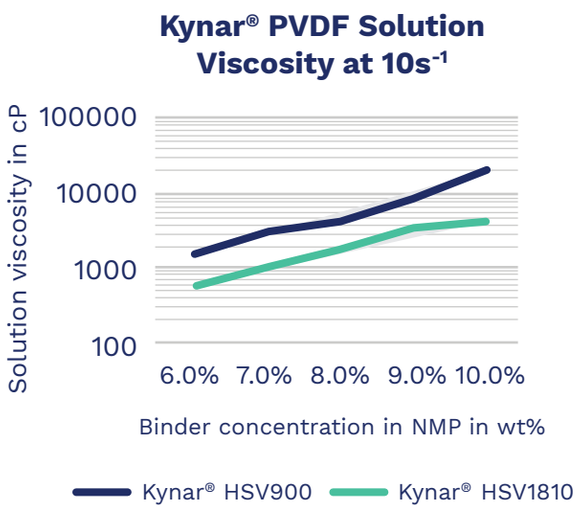
Suspension PVDF



Emulsion PVDF

After agitation during 30min with magnetic stirrer (800rpm) at room temperature (9wt% PVDF in NMP)

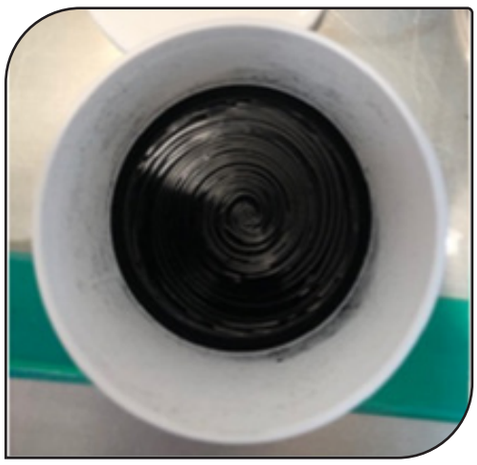
SOLUTION VISCOSITY OF KYNAR® HSV BINDERS IN NMP



A Kynar® binder solution for all cathode active materials:

- 0.8 to 1.5wt% Kynar® HSV900 recommended for LCO
- 3-5wt% Kynar® HSV900 recommended for LFP family (including nano-LFP)
- 1-3wt% Kynar® HSV1810 recommended for Ni-rich NMC, NCA and Mn-rich (both spinel and oxide types)

SLURRY WITH KYNAR® HSV1810 IN NMC811



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