

CPS-LiPP80 Water-Based Primer & Adhesive

For Electrode Primers · Metal Foil/Thin-Film Adhesion · Low-Viscosity Water-Based Coating

pH	Solid Content	Viscosity	Form
7.0 ± 0.2	7.0 ± 0.5%	Approx. 300 cP	Low-viscosity aqueous solution

1. Product Overview

CPS-LiPP80 is a water-based functional material combining CPS's ion-conductive Li-PAN polymer with high-molecular-weight PAA (approx. MW 800,000). After neutralization with Li-PAN, its viscosity decreases significantly compared with the high-molecular-weight PAA solution alone. This characteristic is utilized for electrode primers and adhesives for metal foils and thin films requiring thin and uniform coating.

2. Typical Properties

Item	Typical Specification	Test / Reporting Condition	Remarks
Appearance	Clear yellowish-brown aqueous solution	Visual	Homogeneous aqueous solution
pH	7.0 ± 0.2	25°C recommended	Near-neutral range
Solid Content	7.0 ± 0.5%	Dry residue basis	QC control range
Viscosity	Approx. 300 cP	Brookfield, 0.1 rpm, 25°C	Low-viscosity coating grade

3. Key Features

Low Viscosity · High-MW PAA	Maintains the binding characteristics of PAA80 while achieving a low-viscosity range after neutralization with Li-PAN
Excellent Coatability	Uniform spreading without beading confirmed on metal surfaces such as Al/Cu foil
Water-Based Process	Applicable to water-based primer and adhesion processes without organic solvents such as NMP
Adhesion & Interfacial Function	Combines PAA-based adhesion with the ion-conductive functionality of Li-PAN
Process Versatility	Applicable to brush, roll, and coating processes; spray application can be evaluated depending on viscosity conditions

4. Recommended Applications

Application	Target Substrate / Use	Recommended Positioning
Electrode Primer	Al foil · Cu foil · Battery current collectors	Thin functional primer layer prior to active-material coating
Metal / Thin-Film Adhesion	Al · Cu · Metal foils · Thin films/substrates	Low-viscosity water-based adhesive/coating material
Functional Coating	Paper and other hydrophilic substrates	Thin and uniform water-based functional coating

5. Performance Trends Observed in CPS Internal Evaluation

Processability: Although the PAA80 solution itself has very high viscosity, neutralization with Li-PAN produced a low-viscosity aqueous solution of approximately 300 cP. In brush-coating tests on Al/Cu foil, the material spread uniformly without beading.

Primer/Adhesive Positioning: The product combines the binding characteristics of high-molecular-weight PAA with reduced final viscosity, targeting applications that require thin-film formation and interfacial adhesion.

Product Positioning | A low-viscosity water-based primer and functional adhesive that retains the adhesion functionality of high-molecular-weight PAA while providing improved coatability, rather than a conventional high-viscosity adhesive.

6. Handling & Storage

- Wettability and adhesion may vary depending on substrate surface treatment or coating. Preliminary evaluation is recommended.
- For spray application, verify viscosity in advance according to the equipment nozzle and target coating thickness.
- Store tightly sealed, away from direct sunlight and high temperatures. Protect from freezing.