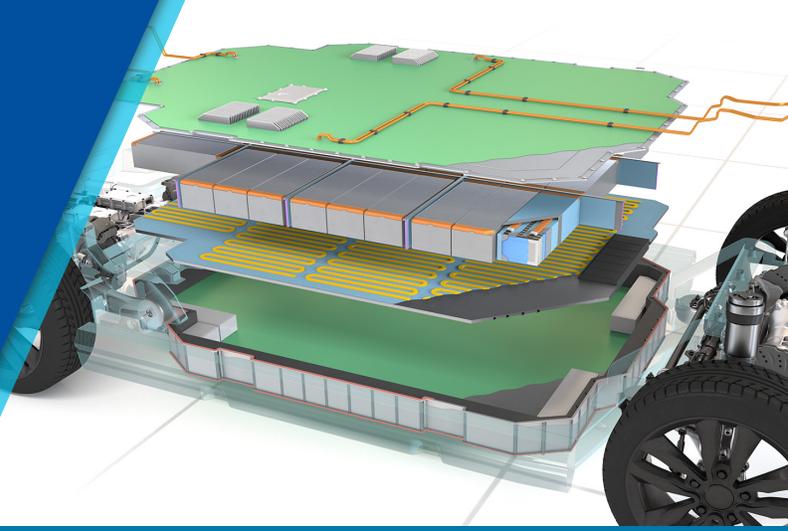


Adhesives & Sealants

PPG EV Battery Pack Material Solutions



PPG is a global leader in adhesives and sealants, combining leading edge science and innovation dedicated to meeting the needs of our customers, in their production environment, every day.

Our latest proven adhesive and sealant technologies are ideally suited to a variety of EV battery pack needs, including sealing of pack shells and components, fixing of cells and modules into packs, structural reinforcement, and impact resistance.

PPG CORABOND® 1K Structural Adhesives

Proven and new products in development for vehicle design.

PPG Value Leveraging Core Competencies (A = Adhesive S = Sealant)

Product/Formulation

- Superior shear strength (A)
- Excellent wash off resistance (A)
- Outstanding corrosion and hygrothermic resistance (A)
- Excellent impact peel strength (A)
- 1K and 2K (S)
- 2K PU foaming (S)
- Coating compatibility (S)
- Pack serviceability (S)

Application

- Automated extrusion dispense options (A)
- Automated hot application for 1K (S)
- 2K Automated dispense with dynamic mixing (S)
- Minimized line assembly time (S)

Trusted global supplier to OEMs & Tiers

In Development

	CORABOND STRUCTURAL	CORABOND SEMI-STRUCTURAL	CORABOND BROAD BAKE
Attributes	<ul style="list-style-type: none"> • 1K epoxy, colors available • Warm and cold pumpable • Wash-off resistance • Corrosion resistance 	<ul style="list-style-type: none"> • 1K epoxy, colors available • Warm and cold pumpable • Wash-off resistance • Corrosion resistance 	<ul style="list-style-type: none"> • 1K epoxy, colors available • Broad temperature cure (140oC -190oC10 min) that also meets the current storage stability (> 3 months)
Performance	<ul style="list-style-type: none"> • Impact: ≥ 20 N/mm – 30N/mm • Peel Strength: ≥ 8 N/mm • LSS: ≥ 25 Mpa • 3-6 month storage stability @ ambient / 40 C/ 0 C 	<ul style="list-style-type: none"> • Impact: ≥ 10 N/mm • Peel Strength: ≥ 4 N/mm • LSS: ≥ 20 Mpa • 3-6 month storage stability @ ambient / 40 C/ 0 C 	<ul style="list-style-type: none"> • Impact: ≥ 25 N/mm • Peel Strength: ≥ 8 N/mm • LSS: ≥ 25 Mpa • 3-6 month storage stability @ ambient / 40 C/ 0 C
Recommended For	<ul style="list-style-type: none"> • Body shop application (Frame) • E-coat oven cure (10Min @ 150°C) 	<ul style="list-style-type: none"> • Body shop application (Hem-flange) • E-coat oven cure (10Min @ 150°C) 	<ul style="list-style-type: none"> • Thick metal section, especially in the rocker to protect battery from crash events • E-coat oven cure

PPG TOTALSEAL® 2K Structural Adhesives

Proven products for vehicle design.

	TOTALSEAL 6015/2	TOTALSEAL 6080	DUAL-MIX 39747
Attributes	<ul style="list-style-type: none"> • 2K PU Structural • High elongation • Solvent free • Good sag resistance 	<ul style="list-style-type: none"> • 2K PU Flexible Bonding • High elongation • Solvent free • Good Sag Resistance 	<ul style="list-style-type: none"> • 2K epoxy • Exceptional impact and peel performance • Excellent corrosion resistance • Compatible with MIG or STRSW welding
Performance	<ul style="list-style-type: none"> • Open Time: 3 – 6Min • LSS: 18 MPa • Tensile Strength: 15MPa 	<ul style="list-style-type: none"> • Open Time: 3 Min • LSS: 3 MPa • Tensile Strength: 3.5 MPa 	<ul style="list-style-type: none"> • Working Time: 90 Min • Set Time: 4 Hr • Cure Time: 24 Hr • Heat Cure Time: 1 Hr
Recommended For	<ul style="list-style-type: none"> • Especially designed for adhesion to broad range of substrates (coated metals, polyesters, ABS, PC, POM, etc.) 		<ul style="list-style-type: none"> • For panel bonding of steel, aluminum, SMC & fiberglass

PPG CORASEAL® 1K Sealants

Proven and new products in development for battery market.

	CORASEAL RT400	CORASEAL 2940	NEW CORASEAL EV 2025
Attributes	<ul style="list-style-type: none"> • 1K, PVC, black • Rubber-based technology • Sealer for body shop • Excellent wash resistance • Non-tacky surface 	<ul style="list-style-type: none"> • 1K, PVC, black • Excellent wash resistance • Non expanding • Accepts welding • Corrosion resistant 	<ul style="list-style-type: none"> • 1K hot-melt, black • Fire-extinguishing • Good serviceability properties • Good compressibility, tightness • Slated for launch in 2021
Application	<ul style="list-style-type: none"> • Apply to substrate and bake through production schedule • Pallet pump, 75°C on gun, 160 bars • 300 mL cartridges, 50 L pails, 200 L drums 	<ul style="list-style-type: none"> • Apply to substrate and bake minimum 20 minutes, 340° F • 42:1 ratio extrusion pump through tapered nozzle dispense gun 	<ul style="list-style-type: none"> • Apply to many substrates used in BP (aluminum, steel, composites) • No curing step Warm applied (~60-70°C) 220 bars (exit pump)
Recommended For	<ul style="list-style-type: none"> • Seam sealing component panels • Component shop applied 		<ul style="list-style-type: none"> • Peripheral assembly seal • Assembly shop applied

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