

Need a custom
solution?

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Adhesive-Free Lamination Technology

Our Adhesive-Free Lamination Technology is an innovative lamination process that combines cost-efficiency, design flexibility and enhanced performance to produce robust cell contacting systems (CCS) without adhesives.

REDUCES COST & DEVELOPMENT TIME



Compared to hot lamination, ENNOVI's Adhesive-Free Lamination Technology is 50% lower in insulation material cost and provides up to 80% faster processing time due to its materials and streamlined processes.

HIGH DESIGN FLEXIBILITY



Patent-pending solution that supports a wide range of designs for various battery form factors including large CCS assemblies.

SAVES ENERGY & CONSERVES RESOURCES



Uses less than 5% energy as compared to the conventional hot lamination process. The absence of adhesive avoids its respective environmental impact.

APPLICATIONS

- + Electric vehicles
- + Commercial transportation
- + Energy storage system
- + Personal mobility

01. LAMINATION LAYER

- + Robustness and durable design.
- + Typical material: PET.
- + Thickness: 0.1mm.
- + Free of adhesive.
- + Weight: 25% lighter than conventional insulation materials.

02. ADHESIVE-FREE LAMINATION

- + In-house process.
- + Same-material-bonding of top lamination layer to bottom lamination layer.
- + Lamination sealed around the current collector to secure the position.
- + Provides insulation between each current collector.
- + Fully customized to current collector layout / design.

03. CURRENT COLLECTOR

- + In-house high-precision stamping.
- + Different materials such as aluminum and copper.
- + Easy to disassemble at end of life.

04. LOW VOLTAGE HARNESS

- + Seamless assembly of FPC or our Flexible Die-cut Circuit (FDC) Technology.
- + Material: Copper.
- + Option for built-in fuse traces or SMT fuses.
- + NTC included for temperature sensing.
- + Laser welded via nickel tabs or ultrasonic welded joining to current collectors.

