Momentive Performance Materials Inc. is a global leader in silicones and advanced materials, with a 70-year heritage of being first to market with performance applications for major industries that support and improve everyday life. The company delivers science-based solutions by linking custom technology platforms to opportunities for customers.

Momentive’s Energy portfolio includes silicone materials for photovoltaic applications such as frame sealing, rail bonding, junction box attach, junction box potting, optical coupling, thermal management and PV encapsulation. The durability and efficiency of photovoltaic (PV) modules can be enhanced significantly when the incumbent PV-cell encapsulation material (Ethylene-Vinyl Acetate, EVA) is replaced with silicone polymer. The physical and chemical property benefits of the SilTRUST® E110 silicone polymer encapsulant ranging from thermal, chemical, and radiation durability to corrosion protection and consistent mechanical properties have all been substantiated with experimental lab and field results.

Key Attributes of SilTRUST® E110 Silicone Encapsulant
- Enhanced durability vs EVA
- Low thermal module stress
- Corrosion protection
- No yellowing
- Excellent heat resistance
- Prolonged damp heat
- PID mitigation

Adhesion & Corrosion Protection
Encapsulated Metals after 500 hours
- Organic pottants allow significant corrosion in DH.
- Momentive Silicone shows good protection against corrosion.

Retention of Optical Properties after Aging

- EVA vs. SilTRUST® E110

Induced Mechanical Stress due to Cure
Due to the low temperature cure and low modulus of silicone encapsulant the induced thermal stress is less in the glass PV module.

Outdoor Data Shows Increased Performance

Silicone Encapsulation Enhances Durability, Efficiency, and Enables New PV Cell and Modules Technologies

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