

Sikasil® AS-780 - New world innovation for backrail bonding



The Sikasil® AS-780 is a high performing two component Silicone designed for in-process bonding of backrails or other mounting devices to PV modules.

The PV industry desires to go into the same direction to save overall costs and improve the long term performance. Away from material and labour intensive mechanical fixation with high risks of glass breakages and micro-cracking in the PV cells. Therefore many solutions of backrails or point holding systems have been introduced into the market but so far no bonding technology could provide all characteristics to meet the demands for optimal in-process application and long term durability over decades. The fixation is one of the most crucial

parts of the system. If the fixation fails the whole system fails although it might look like a minor part in the overall solution.

However with the new innovation of the Sikasil® AS-780 this becomes feasible. It combines the exceptional long term performance of a structural Silicone used in the façade industry with the process ability of a high tack and high green-strength adhesive. The initial green strength and strength development is much higher than existing Silicone technologies. This unique product makes it now feasible to bond the mounting devices and handle the assembled parts within the standard production lines and cycles without the need for any large buffer zones or pre-fixation devices. Furthermore the appearing tolerances between modules and mounting device can easily be compensated by the paste like adhesive and the applied bead geometry. At the same time the Sikasil® AS-780 meets the requirements of the most severe structural glazing standard for façades, the EOTA ETAG 002. This standard is concluded with the expectations of a lifetime of at least 25 years on the tested system. This means the bond will last for decades under harsh environmental outdoor conditions with UV, rain and heat as well as under loads from wind and snow with the corresponding joint geometry.

The innovation of Sikasil® AS-780 enables the PV module and system providers to move forward with the desired cost and material savings in fixation solutions with a secured long term performance and simplified process integration.

Benefits with bonded mounting systems with Sikasil® AS-780

- Savings in material and labour of up to 25% compared to common framing and mechanical installation systems
- Reduction in installation time by up to 40%
- Elimination of pre-fixation means or large buffer zones
- Simplified in-line bonding feasible with existing cycle times
- Savings in backrail material of up to 15% compared to tape solutions
- Reduced glass breakage by elimination of stress peaks
- Simplified tolerance compensation compared to tape solutions
- Minimised micro-cracks on cells due to stress distribution reflects higher performance over the years



- Easier quality control consistency in production compared to the field
- Structurally bonded with an adhesive technology which meets severe façade standards
- Value adding by mounting integration, new designs for BIPV and architectural appeal

The Sikasil® AS-780 will be officially announced and presented to the world at the PV SEC 2012 in Frankfurt, Germany. At our booth we will perform life-demonstration throughout the exhibition at our booth F15 in hall 3.0.

Next to bonding technologies for mounting systems, Sika is also offering adhesives, sealant and potting agents for framing, junction box bonding and potting for the PV industry.

Sika AG is a globally integrated company supplying specialty chemicals and application knowledge. We are present with more than 120 production and marketing subsidiaries in over 70 countries with 13'500 employees. Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting load-bearing structures in construction and industry.

