

SolarSeal Technologies™

Creating architectural building surfaces that protect the building envelope and produce clean renewable energy from the sun is an ongoing quest for the solar and building industries.

SolarSeal Technologies provide the ideas, technologies and tools to create new solar application systems for the building and solar industries.

SolarSeal Technologies™ (patented & patents pending) combines traditional roofing products with crystalline and flexible thin film photovoltaics (PV) creating a new class of solar enabled building surfaces known as Building Integrated Photovoltaics (BIPV).

SolarSeal creates new sustainable, environmentally friendly and energy efficient building surfaces without sacrificing comfort, aesthetics or economy.

SolarSeal Technologies™ solar-to-building processes and application solutions integrates flexible laminate thin film PV or standard and non-glass composite panel crystalline PV modules into new solar roof, wall, masonry and concrete surfaces, generating clean renewable energy from the sun while weatherproofing and protecting the building.

- ❖ SolarSeal PV Roof Systems™
- ❖ SolarSeal PV Metal Roof System™
- ❖ SolarSeal PV Wall System™
- ❖ SolarSeal PV Concrete System™
- ❖ SolarSeal Portal-Panels System™

SolarPower Restoration Systems is establishing product and system license agreements, partnerships and other strategic alliances with major solar and building product companies around the world to utilize our proprietary SolarSeal Technologies™. Contact us to learn how SolarSeal Technologies™ can transform your Company's standard roofing and building products into new solar integrated building solutions. info@solarpower-restoration.com

SolarSeal applications are compatible with current flexible CIGS PV modules manufactured by: Miasole®, Global Solar®, Dow FlexsoLyt™ and SoloPower®.

SolarSeal PV Roof Systems™

The patented SolarSeal PV Roof System™ combines high performance elastomeric roof coatings with the latest flexible thin film photovoltaics, creating new sustainable and renewable solar powered roof surface.

SolarSeal Technologies solves the common problem of photovoltaic modules service life outlasting existing roof systems the PV modules are installed on.

SolarSeal Technologies creates a path to install flexible thin film PV directly over any existing roof system and synchronizes the roof service life with the longer performance life of the photovoltaic modules.

The SolarSeal PV Roof System™ applies thin film or crystalline photovoltaics directly to either new or existing asphalt built-up smooth and granule surfaced 90-pound cap sheet roofing, including SBS and APP modified bitumen roof systems.

SolarSeal PV Roof Systems™ works over all single-ply roof membranes (EPDM, PVC, TPO, and Hypalon) and is the only universal solution designed to apply thin film and crystalline photovoltaics directly onto any roof substrate, creating a monolithic warrantable waterproof photovoltaic roof surface.

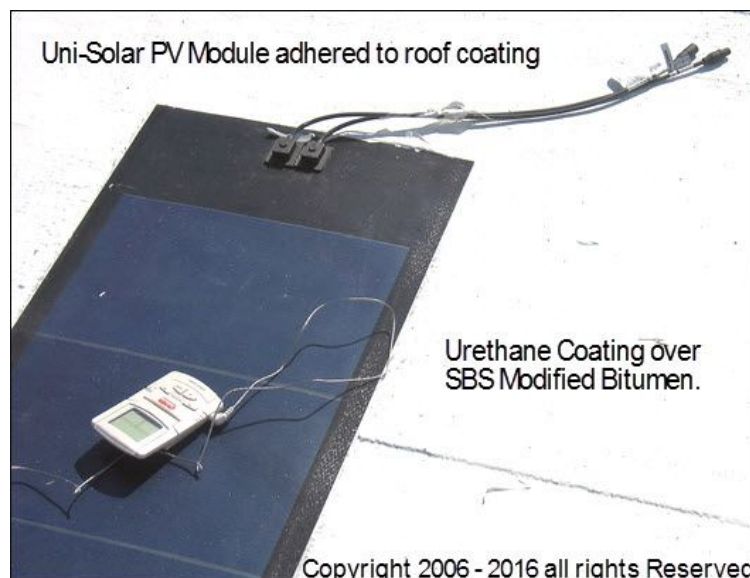
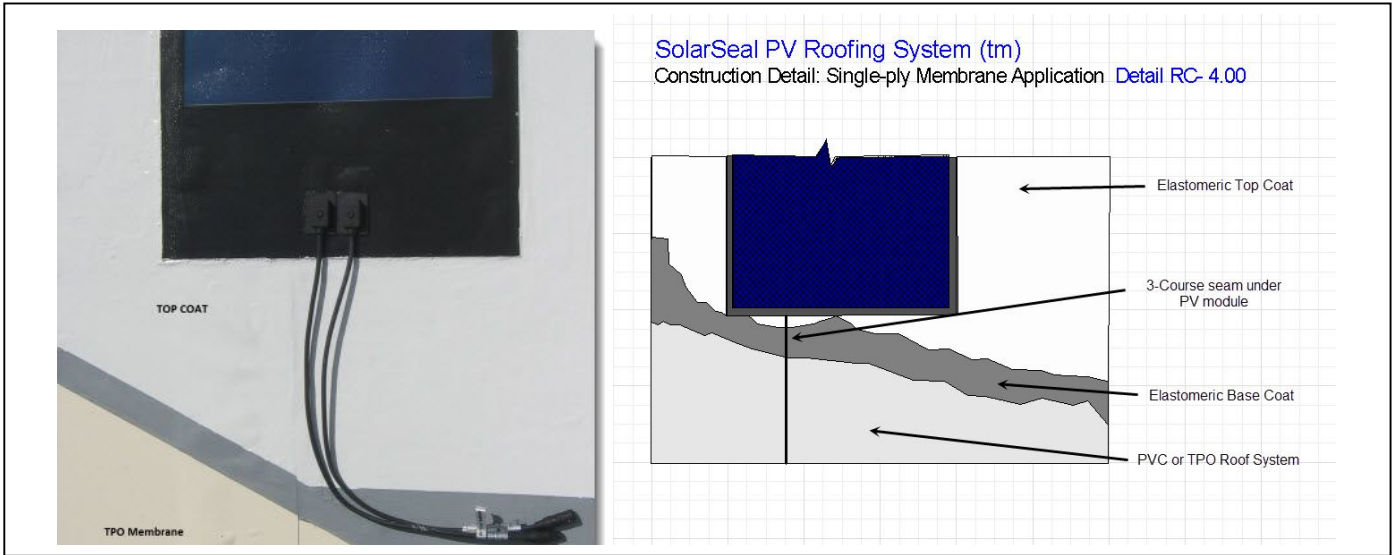


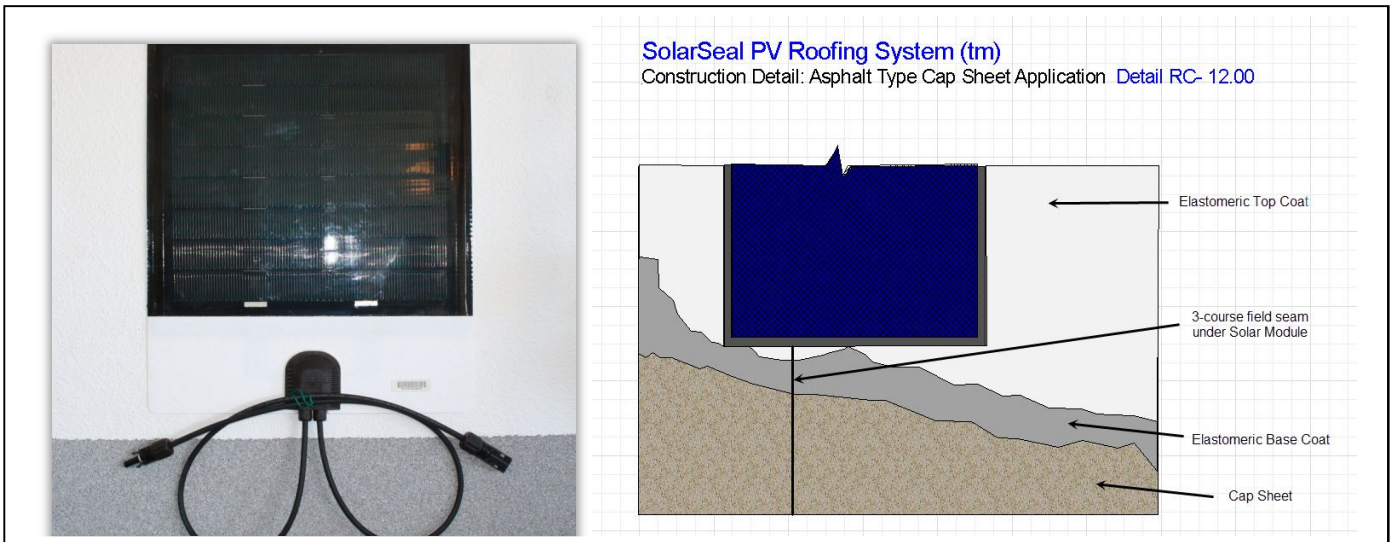
Figure 1 SolarSeal over SBS Modified

US Patents 2010 - 7,666,466 US 2013 - 8,372,226 and pending patents

SolarSeal PV Roof Examples and Bonding Options



Example of polyurethane coating system & solar – one or two coat acrylic or other liquid applied elastomeric coatings are acceptable options



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SolarSeal PV Modules to Roof Surface Bonding Options

1. Strip in seams (3-course) if specified – then apply a base coat – allow to cure. Adhere flexible PV module to coated roof surface with the module’s self-adhesive peel-n-stick adhesive. Apply a top finish coat around modules and remainder of the roof.
2. Optional Method: Strip in seams (3-course) if specified – then apply a base coat – allow to cure. Apply a top finish coat to the roof. Adhere flexible PV module to coated roof surface with the module’s self-adhesive peel-n-stick adhesive. Apply finish coating around the PV module perimeter edge to insure a complete watertight seal.
3. A flexible PV module is bonded to the coated roof surface onsite with a one surface wet adhesive or a two-surface contact adhesive. Apply Finish coating around the PV module perimeter edge to insure a complete watertight seal
4. A solar module with a field applied back surface wet adhesive is bonded to the coated roof surface. The finish coating is applied around the module perimeter edge to insure a complete watertight seal.
5. On the new-coated roof surface, the flexible PV module is bonded to the coated roof surface with a factory or field applied adhesive/fabric tape around the module to insure a complete watertight seal. The fabric flashing tape is coated with the top finish coat. Optional interply components can be integrated into the PV module/coated roof surface to provide improved structural reinforcement and insulation.