

### 10 Key Differences Between the GreenSlope™ Roof Ponding Repair Kit and Concrete Roof Leveling Compounds

When faced with water ponding areas on flat rooftops, one simple and effective solution is to use a roof leveling compound to level out the low area and bring the roof slope back to zero. This helps facilitate flat roof water drainage and prevent the negative *effects of ponding water on a flat roof*. This option is often preferred by building owners for its low cost and effectiveness in prolonging the lifespan of the roof until a re-roof is in the budget. In this article, we'll look at two products commonly used for this purpose: cement-based fillers and the GreenSlope Roof Ponding Repair Kit. With cost, curation time, and all things being similar between products, we'll focus on other key factors to consider when choosing between the two.

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**Concrete Fillers:** Acrylic modified cement

**GreenSlope:** a blend of special binders, recycled fine mesh crumb rubber and admixtures formulated for use on a variety of flat roof systems that also includes in the kit:

- Polyurethane-based primer and adhesive
- 3" brush used for priming
- Mixing bag
- 5 gallon bucket (can be reused)

#### INSTALLATION

**Concrete Fillers:** One-coat installation; however installation requires you to bring water, a bucket, roof granules, and a mixing drill. Additionally, units weigh ~50 lbs and come in bags which are heavy and cumbersome to carry up the ladder and onto the roof.

**GreenSlope:** The GreenSlope compound is highly malleable and easy to work with using a trowel. Everything you need for the application is included in the kit - the material, adhesive, and priming tools, while the relatively lightweight bucket makes it easy to carry up the ladder and onto the roof safely for the one-coat installation.

#### WEIGHT

**Concrete Fillers:** ~10 lbs/ sq ft

The sheer weight of the concrete can add stress to the roof deck and contribute to further roof sag, which may end up leading to further water ponding.

**GreenSlope:** ~2 lbs/ sq ft

Made from lightweight rubber and expanded polystyrene, the GreenSlope roof leveling compound is  $\frac{1}{5}$  the weight of concrete.

#### COVERAGE (1" DEPTH)

**Concrete Fillers:** ~30 sq ft at  $\frac{1}{4}$ " depth; 7.5 sq ft at 1" depth

**GreenSlope:** ~30 sq ft at  $\frac{1}{4}$ " depth; 7.5 sq ft at 1" depth

#### DURABILITY

**Concrete Fillers:** Concrete has notable bond strength and is UV stable, however it is more susceptible to freeze/thaw deterioration and tends to spall and crack around the edges over time, leaving shards that can damage the roof membrane. (i.e. when walked over by maintenance or other personnel with rooftop access)

Additionally, the Western States Roofing Contractors Association's recent bulletin on the compatibility of concrete patching compounds and liquid-applied waterproofing membranes details reports from the field on adhesion problems and other issues with concrete detailed in the Topcoat Compatibility section.

**GreenSlope:** Made from recycled, non-biodegradable materials, GreenSlope has exceptional bond strength and cannot be broken down by microorganisms, air, moisture or UV rays in any reasonable amount of time. The material is similar to that found on professional running tracks and built to withstand harsh weathering conditions.

### TOPCOAT COMPATIBILITY

**Concrete Fillers:** According to the WSRCA, one of the more common issues broadly reported and/or encountered with concrete-based roof leveling compounds is excess moisture remaining in the cementitious repair material at the time of the liquid-applied waterproofing installation. Under heat, the moisture becomes trapped under the membrane, causing voids and blisters which separates the membrane from the substrate. Compromised membrane adhesion enables moisture migration, further exacerbating the disbonding process. Additionally, if the concrete sealer or primer is not fully cured at the time of the topcoating, the membrane and/or its adhesive may not bond properly thus allowing moisture to become trapped underneath.

Another major concern affecting adhesion between cement fillers and liquid topcoats is cement's often rugged surface texture when improperly prepared which can lead to raised fins, divots and chips, causing the membrane to bridge over and leave voids which worsen the adhesion problem. This allows moisture to migrate laterally and causes further disbonding/degradation in areas where moisture is trapped, especially during freeze/thaw cycles.

**GreenSlope:** In contrast, GreenSlope is comprised primarily of fine-grained EPDM (ethylene propylene diene terpolymer) and beaded EPS (expanded polystyrene): materials soft and pliable on the surface but extremely durable when cured. It smooths over easily and leaves a flexible, rubber-like membrane when cured. This malleability and smooth surface texture makes it highly compatible with the vast majority of commonly used liquid-applied waterproofing membranes.

As it relates to adhesion and water retention, the GreenSlope compound is designed breathable and will allow excess water to evaporate easily before being topcoated. This speeds up the curation process and allows for installation and topcoating the same day in most cases depending on the temperature and thickness of the application.

### DRAINAGE

**Concrete Fillers:** Concrete fillers are water-resistant, not waterproof. Additionally, when the perimeter is breached, water can infiltrate and get trapped underneath the concrete, causing leaks and further deterioration of the roof membrane.

**GreenSlope:** Similarly, GreenSlope is water-resistant, not fully waterproof. However, the kit comes with excess adhesive material which can be used to achieve near-full waterproofing. While it displaces the majority of the water, if water does infiltrate, miniscule breathable pores in the material allow the moisture to evaporate quickly before it becomes a problem.

### ROOF SYSTEM COMPATIBILITY

#### Concrete Fillers:

- Mineral Surface/Granulated
- Roof Coatings
- Single-Ply
- Concrete

#### GreenSlope:

- SBS & APP Modified Systems
- BUR Systems
- Shingle Roofing Systems
- EPDM Roofing Systems
- TPO Roofing Systems
- Metal Roofing Systems
- Foam Roofing Systems

### PACKAGING

**Concrete Fillers:** Concrete bags frequently tear and/or get wet, rendering the material virtually useless.

**GreenSlope:** The GreenSlope Roof Ponding Repair Kit comes in a 5 gallon bucket protecting the contents from handling of the material before the install. The individual elements of the compound are made primarily from recycled non-biodegradable materials, so the shelf life of the material is exceptional before the components are mixed with the liquid adhesive.



## Key Differences

### ENVIRONMENTAL BENEFITS

**Concrete Fillers:** No information available.

**GreenSlope:** GreenSlope is made from recycled post-consumer tires (EPDM) and polystyrene: a resourceful re-purposing of materials that otherwise may end up in landfills, illegal stockpiles or dumped in urban and rural areas.

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The application of recycled rubber & EPS on flat rooftops has proven to be extremely effective and long lasting. Local governments that use tire-derived products reap economic and environmental benefits too. Using recycled rubber products can help facility managers meet stringent environmental requirements. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) green-building rating system awards points for environmentally friendly construction features. Additionally, contractors and building owners can use recycled rubber products to qualify new construction for LEED points for using building materials that incorporate recycled content.

For more, see: [\*Sales Benefits Of Using Environmentally Friendly Roofing Products.\*](#)