

RoofGuard™ Installation



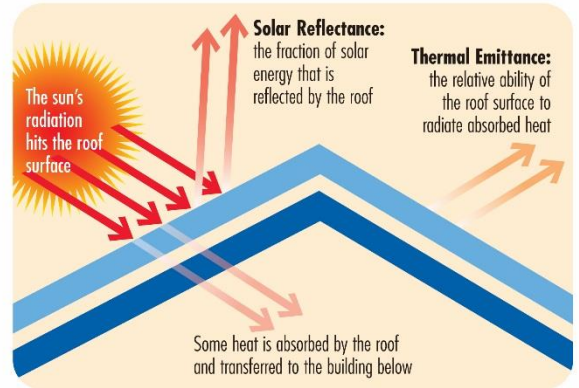
**General Instructions and
helpful Guidelines for
Contractors**



RoofGuard™ is a patented clear latex formulation that is spray applied to existing asphalt shingle or tile roofs that protects and preserves shingle integrity.

High winds, granular loss, heat, algae growth, and Ultra Violet radiation are directly associated with premature roof failures.

RoofGuard™ helps protect roof surfaces from wind uplift, loss of granular, and growth of algae.



Laboratory testing performed to Florida Building Code TAS-100-95 standards has proven wind uplift reduction of two hundred and fifteen percent (215%) with an application rate of one hundred square feet per gallon (100 SF/Gal)



Florida Atlantic University Testing

RoofGuard™ Technical Info

RoofGuard™ is protected under US Patent Number 8,058,342 to prevent roof damage against wind uplift and granular loss to existing asphalt shingles.

In order to completely understand the effect of RoofGuard™ on asphalt-based roofing materials, the mechanism of asphalt degradation must first be understood. Asphalt is a complex mixture of hundreds of aliphatic and aromatic hydrocarbons. As asphalt weathers, it breaks down chemically. The individual molecules absorb UV radiation from the sunlight. This energy causes the molecules to vibrate and ultimately to fracture.

RoofGuard™ coated shingles show less degradation than un-coated weathered shingles and has formed a monolithic single layer membrane which is formed in-situ on the shingle. Some small fissures in the asphalt present at the time of RoofGuard™ application are actually filled, thus limiting further degradation of the shingles. These fissures would allow water to penetrate through the asphalt into the organic mat causing the shingles to swell and subsequently shrink when dry. Additional stress would develop when the shingle would freeze and thaw. Ultimately, the shingle would fail and the roof would leak, requiring replacement.

RoofGuard™ increases the longevity by two separate mechanisms. First, asphalt is subject to degradation by UV radiation. RoofGuard™ is transparent to UV radiation and it does not absorb this intense radiation. It is not subject to polymeric degradation seen in less durable chemistries like aromatic urethanes and butyls. RoofGuard™ is formulated with UV blockers to protect the asphalt from degradation.

A second mechanism of RoofGuard™ provides a water-resistant barrier over existing asphalt shingles. RoofGuard™ prevents contact of bulk water with the asphalt membrane, thus preventing low molecular weight asphalt fractions from leaching out of the asphalt. RoofGuard™ prevents intimate contact of water with the membrane and, more importantly, the reinforcing mat, thus eliminating the formation of ice and freeze/thaw changes in the membrane. Water infusion into the organic felt would also cause degradation of the mat via biological attack.

RoofGuard™ acts more like a fully adhered functional membrane than merely a paint type coating. Studies conducted have demonstrated that greater than 75% of initial elongation properties were retained even after five years exposure.

Laboratory testing performed to Florida Building Code TAS-100-95 standards has proven that a wind uplift reduction in excess of two hundred and fifteen percent (215%) is obtainable with a coverage rate of one hundred square feet per gallon (100 SF/Gal) with no water infiltration under the decking. Actual uplift reductions will vary depending on application methods, rates, and physical condition of the shingle surface being treated. Wind uplift is not covered under Enviroseal warranty, only algae growth and retention of granular. No additional warranties are expressed or implied.



Safety First!

Working on a roof can be dangerous. On older roofs with loose granular, the surface can be slippery and you can lose your footing quickly. Roof surface temperatures can exceed 140° and can cause disorientation. Please take proper safety considerations for you and your crew beforehand.

Remember To:

- Stay hydrated
- Provide proper safety equipment
- Have a safety plan outlined in case of an accident



Quotation Preparation

In order to provide the customer with an accurate estimate, the roof must be visually inspected and the roof needs to be measured accurately. The total square footage will determine the sale price of the service and the installation labor. While measuring the roof, it must be checked for any loose or damaged shingles. Most state laws require only a licensed roofing contractor can puncture the roof surface like nailing a shingle or tile to the decking so industry knowledge including local laws are important to consider.

Prepare the estimate form at the time of measurement, provide the customer with printed brochures, answer your customers questions, and get a deposit to close the transaction.



Roof Cleaning

If the surface is dirty from algae, it needs to be cleaned first. *Gloeocapsa Magma*, or better known as Roof Algae, is black in color. If the roof is not cleaned prior to application of RoofGuard™, the algae will be permanently sealed into the surface and can never be removed. Algae growth can also inhibit adsorption of the RoofGuard™ into the surface.

Soft washing should be done one week before installation of RoofGuard™. Immediately after cleaning, rinse the roof well with water and allow one week to dissipate any chemical residue.

If the roof is pressure washed or there was any rain, it should dry a minimum of 24 hours before application.



Site Preparation

Always consider covering shrubs and A/C compressors along the bottom of the roof line incase any drips come off the roof. It is also a good idea to cover walkways, driveways, patios or other surfaces where drips can fall . If accidental drips occur, wash off immediately with water. Once dry, RoofGuard™ will be very difficult to remove without solvents or heat.



Weather Considerations



The weather conditions for application should be dry with light winds with temperatures above 50° F. The surface should be thoroughly dry with no chance of rain for four hours after application.

Wind speed in excess of 15 MPH could result in airborne drifting and carry overspray to neighboring properties.

Spray Equipment and Settings



Enviroseal recommends using a commercial quality airless paint sprayer with an extension. The spray tip to use should be a large one, size 5-17 and up. A tip size of 6-21 is preferred.

Use the sprayer at lower pressure to minimize wind drift and overspray. The pressure should be adjusted to maintain a consistent spray pattern.

Set up the sprayer completely before climbing on roof.

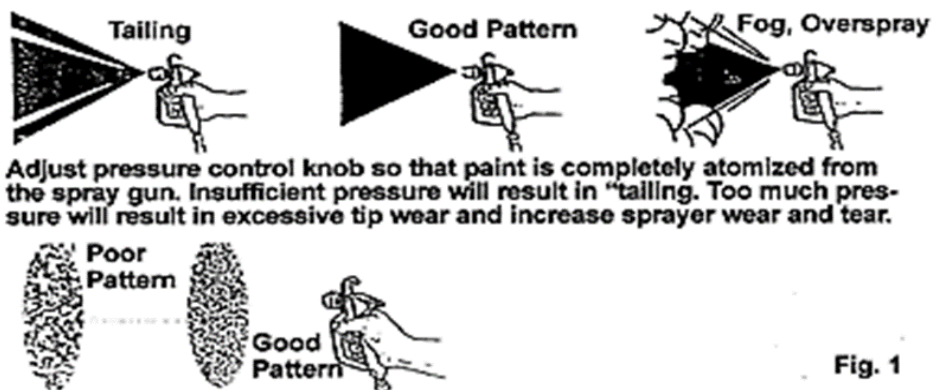


Fig. 1

One Chance!

You only have one chance to apply RoofGuard™ because it adsorbs into the dry surface. This means you must flood the surface until it reaches it's saturation point prior to running . After RoofGuard™ dries, the surface will not adsorb liquids so there is no need for a second coat.

Do not install one light coat because the second coat will not adsorb and the depth of penetration into the surface will be minimal.



Cutting In



Start by cutting in all outside edges including valleys and ridge caps.

Valleys and Ridge Caps should get multiple applications.



Most roof leaks occur in valleys. RoofGuard™ is not guaranteed to fix. Never make a claim that RoofGuard™ will fix a leak.

Ridge cap damage is usually caused during high wind events. Multiple applications will help prevent this damage.

Filling Open Areas

After cutting in all outside edges, fill in the main section.

It is a good idea to have a roller handy to back-roll incase of any runs .



No Runs!



RoofGuard™ dries clear **BUT** all runs will be visible when it dries.

Any runs should be rolled out immediately while the material is wet, there is no remedy for this after it dries.

End Results

