



Technical Data Sheet

GoNano® Shingle Saver

NANOTECHNOLOGY DRIVEN CLEAR & BREATHABLE PENETRATING SEALER FOR ASPHALT SHINGLES.

Description

A new solution for extending and maintaining your roof. By using a nano-technology-driven approach, GoNano developed a breathable, deep penetrating, clear, hydrophobic, and UV-resistant coating to make asphalt shingles more durable.

Gonano Shingle Saver is a deep penetrating technology that protects against water-soluble and freeze/thaw cycles.

Through constant development and the latest advances in nanotechnology, GoNano developed the first nano-coating for asphalt shingles.

Once applied on the surface, the nanoparticles connect to the aggregate on the surface and the bitumen, creating a hydrophobic environment.

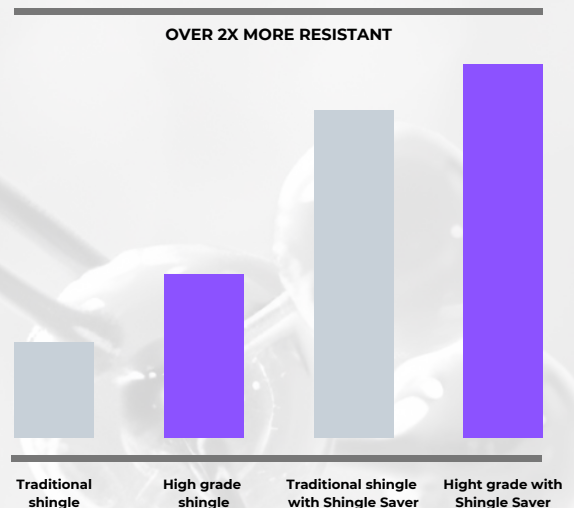
The shielding reaction reduces the aging speed, increases its resistance to impact, and wind.

GoNano's nanoparticles have a longer service life and efficacy than traditional sealants.

Aging reduction
-Up to 68%

Service life
-15 years

SHINGLE AGING RESISTANCE UNTREATED VS TREATED TEST



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GoNano[®] Single Saver

Technology // Advantages

- **Composition** - Made with high-performance nanosize organosilane & organosiloxane. Its molecular structure with dual bonding properties allows stronger connections, thus increasing performance and resistance.
- **Exceptional waterproofing** - Penetrates deep within the shingle, chemically reacting within the pores and capillaries, creating a long-lasting hydrophobic surface that beads water.
- **100% breathable** - Non-film forming. Allows moisture to escape without adverse effects to the sealer. Does not trap moisture.
- **Improve adhesion between bitumen and aggregate** - The chemical reaction increases the bonding between the substrate and aggregate by reacting with the aggregate and the bitumen.
- **Improve oxidization resistance** - Reduction of the creation of polar bonding that affect aging.
- **Resists moisture intrusion** - Resists wind-driven rain, spalling, pitting, and cracking.
- **Resist organic growth** - Mold, mildew, lichen and efflorescence.
- **Resists freeze-thaw & thermal cycling damage** - Resists cracking by preventing the ingress of water.
- **Provides ease of maintenance**

- **Improves durability** - Prevents capillary uptake of water, UV degradation and oxidation process.
- **Natural flat finish** - Does not change surface appearance, UV stable, will not break down with light exposure.
- **Can be applied to all shingle roofs** - Ideal to be applied on roofs who are new or with low to no damages.
- **Solvent-based** - Excellent for cold-weather environments.
- **Incomparable 5, 10 or 15 year warranty** - Guaranteed to never delaminate, flake, chip, degrade from UV light exposure.

Typical Properties

Appearance: Clear

Odor: Mild Petroleum/Solvent

Packaging: 20L (Approximately 5 Gallons) Drum

LOW VOC: 250g/L maximum

Flash Point: >77°C

Relative Density: 0.78 -0.81 g/cm³

Surface Preparation

1) Clean

The asphalt substrate must be structurally sound and clean of oil, grease, dirt, wax, curing compounds, efflorescence, paints, previous sealers, adhesives and other contaminants that might interfere with the penetration of the sealer.

Power wash, acid etch or mechanically scarify as necessary to achieve the desired surface condition. Allow for proper dry time before application.

May be applied to slightly damp surfaces, although maximum penetration is achieved on dry substrates. Do not apply if standing water is visible.

2) Installation temperature

Surface and air temperatures must be at least 33°F during application. Surface and air temperatures should not exceed 95°F. Do not apply when rain is expected within 12 hours following application. Do not apply during inclement weather or when inclement weather is expected within 12 hours

3) Reparations

Crack, patching and expansion joint sealants can be applied before or after application; always test for compatibility and adhesion.

4) Protection

Protect people, property, vehicles, window glass, roofing materials, plastic products, shrubbery, landscaping and all surfaces not set for treatment from overspray.

Application

1) Do a test

Always test a small area before application to ensure desired performance, aesthetics, coverage rates and to verify application technique. Let test area dry thoroughly, 5-7 days, before inspection.

2) Stir

Stir material thoroughly before and during application. Do not dilute or alter material for purposes other than specified.

3) How to apply

Apply with a roller, brush or low-pressure non-atomizing sprayer. Apply to saturation and roll or broom out any puddles until the sealer penetrates the substrate. If it starts to rain, stop treatment and cover the impregnated areas

Dry Time

Typical drying time is 4-6 hours at 25°C and 50% relative humidity. Cooler temperatures or higher relative humidity can extend the drying time.

Water repellency will continue to develop within 7 days of application.

Clean Up

Clean equipment, tools and surfaces with xylene. Unused or old material may be disposed of in a waste disposal site in accordance with your laws.

Precautions/Safety

Avoid contact with skin, eyes and clothing, do not take internally. Use appropriate safety equipment during application and handling.

Surface Preparation

- Proper application is the responsibility of the user.
- Will not inhibit water penetration through unsound or cracked surfaces with defective flashing, caulking or structural waterproofing.
- Spills should not be allowed to sit for extended periods of time, clean all spills in a timely manner.
- Take caution with specially coated glass. Test small areas before application to ensure the product does not discolor the coating. Plastic windows will turn opaque when sprayed with this product.
- Make sure the most current versions of technical data sheets are being used.

Coverage

1 coat: 50-70 S/F per L.

Variations in texture and porosity of substrate will affect the coverage and performance of the product.

Limited Warranty

This Limited Warranty ("Warranty") applies to any manufacturing defects of the GoNano Product, as defined herein. Subject to the conditions, exclusions, limitations, and requirements set forth in this document, GoNano warrants that the Product selected for or applied to the Building will, if properly stored, installed and applied by the Applicator, protect asphalt shingles or EPDM/Torch down commercial roof Technology, improve their durability and offer added protection against high winds, hailstorms or leaks during instances of heavy precipitation for a period of 5-15 years, depending on original age of asphalt shingle. If Warranty process has determined that the Product failed to comply with this Limited Warranty even though it was properly stored, installed and applied by an authorized Applicator, then, GoNano's Warranty shall be a "full money back warranty" and its sole liability under this warranty is to refund (in accordance with Procedure below) the Treatment Cost identified above if during the 10 OR 15 year warranty period from the Treatment Date identified above the Product fails in one of the following ways:

1. 30% or more of the treated surface or shingles peel, curl, or wave during the 10 OR 15 year warranty period; or
2. The treated roof suffers a water leak penetrating through the treated shingles during the 10 OR 15 year warranty period; or
3. The Building Owner's property insurer requires the Building Owner to replace the treated portion of the roofing system due to the failure of the GoNano treatment.

Warranty Requirements

In order for this Limited Warranty to be effective, the following conditions must be met:

- 30% or more of the treated surface or shingles peel, curl, or wave during the warranty period; or
- The treated roof suffers a water leak penetrating through the treated shingles during the warranty period.

FOR MORE INFORMATION ON THE WARRANTY, PLEASE REFER TO THE 5, 10 OR 15 YEAR LIMITED WARRANTY DOCUMENT OR CONTACT: INFO@GONANO.CA

	Best	Better	Good	Competitor
Product Name	Shingle Saver	Revive	Bio-boost	Soybean oil
Age of material	0-7 y/old	7-15 y/old	10+ y/old	Any age
Years of life added	10-15 years life added	5-10 years life added	3-5 years life added	up to 3 years of life added
Breathability	✓✓✓	✓✓✓	✓✓✓	✓✓✓
Rejuvenation	✓✓✓	✓✓✓	✓✓✗	✓✓✗
Weather resistance*	✓✓✓	✓✓✗	✓✗✗	✗✗✗
Hail impact resistance	✓✓✓	✓✓✗	✓✗✗	✗✗✗
UV resistance	✓✓✓	✓✓✗	✓✗✗	✗✗✗
Reduce Granule loss	✓✓✓	✓✓✗	✓✗✗	✗✗✗
Wind resistance	✓✓✓	✓✓✗	✓✗✗	✗✗✗
Heat	✓✓✓	✓✓✗	✓✗✗	✗✗✗
Freeze-thaw	✓✓✓	✓✓✗	✗✗✗	✗✗✗
Growth & Staining	✓✓✓	✓✓✗	✗✗✗	✗✗✗