

TECHNICAL DATA SHEET (TDS)

Description

Shingle Shield Max™ is a high-performance, professional grade roof coating formulated to protect asphalt shingles from environmental degradation. This proprietary sealer penetrates the shingle surface to form a flexible, hydrophobic barrier that resists moisture infiltration, ultraviolet radiation, thermal cycling, and microbial growth.

Function & Performance Characteristics

- **Application:** Designed for direct application to asphalt shingle substrates.
- **Film Properties:** Upon curing, forms a clear, breathable film that enhances water resistance while maintaining substrate integrity.
- **Durability:** Significantly reduces surface erosion of granule layers, helps minimize premature aging, and provides added resistance to hail impact.
- **Cleanability:** Cured surface is compatible with mild detergents and can be easily maintained without compromising the coating.
- **Finish:** Imparts a low-gloss sheen for improved visual uniformity without altering the underlying color profile.

Environmental Profile

- Water-based, non-toxic formulation
- Low VOC content
- Non-flammable and safe for residential use

Recommended Use

Ideal for residential and commercial roofing systems utilizing asphalt shingles. Suitable for preventive maintenance and restoration applications.

Primary Applications

Shingle Shield Max™ Roof Sealer is an excellent roof replacement alternative especially for excessive deterioration or end of life asphalt shingles.

Features/Benefits

- Aides in extending the life of existing shingles.
- Reduces granular loss
- Provides an added water-resistant protective layer
- Mold and Mildew Resistant

- Long Lasting
- VOC compliant in all 50 States and Canada
- UV stable, non-yellowing
- Clear matt finish
- Protects against hail damage

Technical Information

Property	Result
Mix Ratio, By Volume	No Mixing Required.
Volume Solids % By Weight	Mixed: 25%
Density (KG/L)	Mixed: 1.06
VOC Content	<25 g/L
Flash Point	Same as Water
Freezing Point	Liquid/ 32°F (0°C) – Keep from Freezing
Dilution	Do not dilute

System Properties

Property	Result
Flexibility 1/8" Mandrel - ASTM D1737	Pass
Viscosity @ 77°F (25°C)	Mix: 500 cps
pH	4.5-5.5
Appearance	White Solution – Dries Clear
Transition Temperature	45°F (7°C)
Water/Alkali/Chemical Resistance	Yes

Packaging

This product is available in 5 or 250 US Gal. containers

Storage/Shelf Life

Store in a cool, dry, well-ventilated area. Keep containers tightly closed and store away from heat, sparks, open flame or oxidizing materials. Extended storage at excessive temperatures may produce component separation and odorous fumes from product decomposition.

This product has a shelf life of up to one year in its original, sealed, unopened container. If product appears to be hardened or separated contact Vital Coat before use. Keep from extreme cold, heat or moisture. Do not let it freeze. Keep out of direct sunlight. Keep out of reach from children.

Storage Temperature Min/Max 40°- 95°F

Directions for Use

SURFACE PREPARATION & INITIAL ASSESSMENT

Initial Assessment & Warranty Verification

- Perform a comprehensive roof inspection prior to application to evaluate the overall condition of the shingles and ensure structural integrity.
- **CRITICAL:** Shingle Shield Max™ Roof Sealer is a preventative maintenance sealer; it is **not** a repair product for active water leaks. Repair all active roof leaks and structural defects using appropriate roofing caulk or sealants prior to application.
- Always verify with the shingle manufacturer that the application of this product will not void your current roofing warranty.

Surface Cleaning & Preparation

- The roof surface must be completely clean, structurally sound, and free of loose, broken, or deteriorated shingles.
- Surfaces must be free of active organic growth, moss, lichen, or stains from mold and mildew. It is recommended to have the roof cleaned by a professional roof cleaning contractor using industry-standard low-pressure methods to avoid granule loss.
- The roof must be 100% dry at the time of application. Damp substrates will cause haziness, blushing, or a total loss of adhesion.
- Ensure the shingles are free of any prior water-repellent treatments or contaminants that could prevent penetration and adhesion.

Pre-Application Testing

- Always test Shingle Shield Max™ Roof Sealer on an inconspicuous area of the roof prior to full application to ensure proper adhesion, absorption, and satisfactory visual appearance.

Weather & Safety Restrictions

- Do not apply if rain, heavy dew, or freezing temperatures are forecasted within 24 hours of application.

WARNING: Always ensure you are using proper Personal Protective Equipment (PPE) and OSHA-approved fall protection when working at heights or on a roof surface. Follow all local building codes and roofing best practices.

Optimal Conditions at Application

Ambient Temperature	Above 50°F & Below 85°F*
Surface Temperature	82°-95°F*
Liquid Temperature	45°-95°F*

Note The indicated application temperature is optimum. Shingle Shield Max™ Roof Sealer can be installed at lower and higher temperatures. Cure time are impacted by temperature. Cure times are reduced with heat and increased with cooler temperatures. It is not recommended to apply in temperatures lower than 45°F and higher than 95°F.*

Preparing Shingle Shield Max™ Roof Sealer for Use:

Stir contents of container to insure proper mixing prior to use.

Application:

Using the right tools is critical to achieving the best coverage rate and sealer thickness for optimal performance. The most common method of applying the sealer is using a pump-style sprayer and roller for back rolling over sprays when necessary. To achieve the best aesthetic and performance results, follow these professional application techniques. **Note:** Tip selection, orifice size, and spray pattern are left to the discretion of the professional installer based on preference and equipment setup.

Application Techniques & Pattern Control.

1. **Application Direction:** Begin the application from the lowest point of the roof and work upward. This bottom-up approach prevents excess product runoff from creating visible streaks on untreated shingles below.
2. **Pressure & Tip Maintenance:** Ensure the sprayer maintains constant, optimal pressure to deliver a uniform volume of product. Avoid using equipment that drips, splatters, or produces runs. Inspect the nozzle orifice frequently. Worn or partially clogged tips cause an uneven pattern (heavy edges), which will alter the final finish. Clean or replace the tip immediately if the pattern distorts.
3. **Distance & Stroke Control:** Hold the spray wand tip approximately 8 to 10 inches from the surface (adjust slightly based on sprayer type). Apply product using steady, even strokes across a manageable work area. Best practice is to spray parallel to the horizontal shingle lines to naturally mask pattern transitions and edges. Target a 20% pattern overlap on each pass. To prevent product buildup or puddling, do not stall or slow down at the turn of your stroke.
4. **Cold Climate / Ice Dam Mitigation Technique:** In regions prone to ice damming, angle the spray wand tip slightly upward under the bottom lip of the overlying shingles. This pushes the product into the lap joint, sealing the gap beneath the shingle to reduce water from backing up, freezing, and lifting the shingles during winter weather.

5. **Section Transitions & Wet Edge:** Continue moving upward until you reach a natural break point. Begin the next section at the low side of the roof, working upward and blending into the active, previous wet area. Continue this process until the entire roof is coated.
6. **Multi-Coat Application:** For optimal protection and a uniform finish, this product can receive a second "Finish Coat" to ensure complete coverage. Apply the second coat thinner than the first, following the recommended coverage rates below.
7. Allow the first coat to dry for a minimum of 30 minutes before applying the second.
8. To ensure 100% coverage without highlighting spray patterns, apply the second coat **parallel to the shingle lines**, staggering your passes by offsetting them slightly from the first coat's pattern edges.
9. **COVERAGE & THICKNESS SPECIFICATIONS**
10. **First Coat Coverage Rate:** 150 – 200 ft²/gal
11. **Second Coat (Finish Coat) Coverage Rate:** 300 – 450 ft²/gal

CAUTION: Always utilize appropriate Personal Protective Equipment (PPE) and OSHA-approved fall protection when working on a roof. Consult a professional installer if you are unfamiliar with steep-slope applications.

Note The indicated coverage rates are based on standard 3-tab asphalt shingles. Shingle types with irregular textures, architectural profiles, or degraded surfaces will require additional material to achieve full coverage. Actual coverage will vary depending on the condition and deterioration level of the substrate.*

Curing:

Do not touch treated surface during curing. Do not add water or allow water to come in contact while curing. Protect surface from debris coming in contact with surface while drying.

Drying/Cure Times	
Pot Life	6 Months after opening @77° (25 C°)
Tack Free Time @77°F 50% RH	.5 – 1 Hour
Min/Max Recoat Time @77°F 50% RH	.5 - 2 Hours
Dry to Touch	.5 Hours
Water Resistant	24 Hours
Full Cure	72 hours

Note Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.*

Clean-up

Clean all application equipment with a specified cleaner. Once the material hardens, it can only be removed mechanically. If the product splatters, wash thoroughly with hot soapy water.

Roof Care/Maintenance

To maximize the performance and service life of your Shingle Shield Max™ Roof Sealer protection system, adhere to the following maintenance guidelines:

1. Bi-Annual & Storm Inspections

- Inspect the roof at least twice a year—once in the spring to identify winter ice/snow damage, and once in the fall to prepare the roof for the upcoming winter.
- Perform additional visual inspections immediately following major storm events (high winds, hail, or heavy debris impact).

2. Debris Removal & Drainage Management

- Keep the roof surface entirely clear of organic debris (leaves, pine needles, moss). Accumulated debris traps moisture, which will prematurely deteriorate both the sealer and the underlying shingles.
- Regularly clear roof valleys, gutters, and downspouts to ensure rapid, unobstructed water drainage.

3. Vegetation & Pest Control

- Trim back surrounding tree branches so they do not overhang or touch the roof.
- Limbs in contact with the roof will scrub the surface, mechanically damaging the protective sealer film and the shingle granules. Keeping branches back also deters rodents and pests from accessing the roof.

4. Shingle & Flashing Maintenance

- Secure loose shingle tabs immediately. Fasten or seal loose tabs using a high-quality roofing cement or replace the damaged shingle entirely.
- Periodically inspect all roof penetrations, caulking, and metal flashings to ensure seals remain watertight.

5. Monitor Moss and Algae Re-growth

- While the sealer helps resist moisture, shaded or damp roof sections may still collect airborne spores. Treat any early signs of moss, mold, or algae immediately with an eco-friendly, non-acidic roof cleaner. Allowing thick root structures or lichen to establish will physically anchor into the coating, damaging the protective film when eventually removed.

6. Inspect Snow Removal Tools (Cold Climates)

- If heavy snow accumulation requires manual removal using a snow rake or shovel, ensure the tools have protective rubber edges or plastic guards. Avoid scraping the tool directly against the shingle surface. Forcing metal edges across the roof will slice through the sealer coating and strip away the protective granule layer.

7. Check Ridge Vents and Roof Ventilation

- Ensure all ridge vents, soffit vents, and static roof vents remain clear and fully operational. Adequate attic ventilation reduces excessive roof deck temperatures in the summer and minimizes severe freeze-thaw cycles in the winter. Regulating these temperatures reduces the thermal expansion and contraction stress placed on both the shingles and the sealer coating.

8. Professional Cleaning Protocols

- Clean the roof annually, or more frequently if local climate conditions promote rapid organic staining.

CRITICAL: Always hire a licensed, professional "soft wash" cleaning company. Never use high-pressure washers, abrasive mechanical devices, or harsh chemical stripping agents, as these will strip away the sealer and damage the shingles. For general maintenance washing, use only low-pressure water mixed with standard laundry-grade detergents.

Precautions/Limitations

1. Technical Limitations & Environmental Conditions

- **Safety Compliance:** Before handling this product, thoroughly consult the Safety Data Sheet (SDS) and container labels for complete physical and health hazard information.
- **Moisture Constraints:** The moisture content of the shingle substrate must be below 4% at the time of application. Do not apply on porous surfaces where subsurface humidity transfer may occur during application.
- **Dew Point & Temperature:** The roof substrate temperature must be a minimum of 5°F (3°C) above the measured dew point to prevent micro-condensation.
- **Humidity Limits:** The maximum relative humidity during application and the initial curing phase must not exceed 85%.
- **Cure Protection:** Protect the newly treated roof from humidity, heavy condensation, dew, and contact with water during the initial 24-hour curing window.
- **Slip Hazards & Fall Safety:** Use extreme caution when walking on the roof after sealer application. The treated surface can become slippery when wet.

2. Site Containment & Overspray Control

To prevent severe property damage, liability claims, and accidental staining, strictly adhere to the following containment and application rules:

- **Wind & Drift Restrictions:** Never apply this product during windy conditions or when wind speeds pose a risk of overspray drift. Shingle Shield Max™ dries into a highly durable, permanent film that is extremely difficult—or impossible—to remove once cured on unintended surfaces.
- **Property Masking:** Prior to application, completely cover or relocate all property within the potential drift zone. This includes nearby vehicles, patio furniture, windows, siding, and landscaping. Use drop cloths on the ground below the roof eaves to catch drips or runoff.
- **Equipment Isolation:** Completely avoid spraying solar panels, skylights, roof-mounted HVAC units, or mechanical ventilation systems. Mask and isolate air conditioning units entirely; do not allow overspray to be drawn into active intake fans or compressor coils.
- **Edge & Perimeter Controls:** Avoid heavy application passes near roof edges that cause product to run over the fascia, gutters, or soffits. Use cardboard shields, spray guards, or specialized edging tools at all perimeters to contain the spray pattern strictly to the shingles.
- **Staging Area Protection:** Never mix, pour, or load the sealer into sprayers directly over unprotected staging areas, driveways, decks, or sidewalks. Always establish a dedicated mixing station using heavy-duty plastic sheeting or containment trays.
- **Equipment Clean-Out:** Do not flush, rinse, or clean sprayers near sensitive areas, lawns, gardens, or paved surfaces. Perform all equipment teardown and rinsing away from customer property to eliminate the risk of accidental chemical spills and damage claims

2. Emergency Clean-Up & Spill Response

In the event of an accidental spill, drip, or overspray onto unintended surfaces, immediate action is required. Once Shingle Shield Max™ cures, it becomes extremely difficult or impossible to remove.

- **Immediate Action (Wet Product):** Thoroughly wash, flush, and saturate the affected area with clean water as quickly as possible. Wipe the surface down immediately with a clean, wet cloth. Repeated, heavy rinsing while the product is still wet is the most effective method for complete removal without damaging property.
- **Cured Material on Glass/Windows:** If dried spots or overspray land on windows or glass surfaces, allow the product to dry completely. Carefully scrape the residue off the glass using a flat-bladed window scraper held at a shallow angle. Do not use metal blades on tinted glass or plastic windows.

- **Solvent Removal & Substrate Warning:** Acetone can be used to break down and dissolve dried or stubborn sealer material for removal.
 - **CRITICAL WARNING:** Acetone poses a significant threat to underlying substrates. It will melt plastics, dissolve paint, damage vehicle finishes, and strip factory coatings from siding or trim. Always spot-test acetone in an inconspicuous area first, use it sparingly, and rinse the area immediately with water afterward

Health and Safety Precautions

Prior to handling, mixing, or applying Shingle Shield Max™ Roof Sealer, applicators must read, understand, and comply with all instructions, best practices, and the official Safety Data Sheet (SDS). This product is recommended for use by professional contractors

Personal Protective Equipment (PPE) & Workspace Control

- **Eye & Skin Protection:** Always wear appropriate chemical-resistant safety goggles or face shields alongside protective gloves and long sleeves to prevent skin and eye exposure.
- **Site Hygiene:** Maintain a neat, clean, and organized mixing station. Ensure adequate workspace ventilation to avoid localized vapor accumulation. Keep the product out of reach of children and pets.

First Aid Measures

- **Eye Contact:** Immediately flush eyes with clean, flowing water for a minimum of 15 minutes, holding eyelids open. Seek immediate medical attention or consult a physician.
- **Skin Contact:** Wash the affected skin area thoroughly with plenty of soap and clean water. Remove contaminated clothing and launder completely before reuse. If irritation develops or persists, consult a physician.
- **Inhalation (Respiratory):** If respiratory distress or irritation occurs, immediately move the affected individual to fresh air. If breathing remains difficult or symptoms persist, contact emergency medical services or a physician.
- **Ingestion:** Do not induce vomiting unless directed by medical personnel. Rinse mouth with water and seek immediate medical attention.

Performance Attributes

Shingle Shield Max™ Roof Sealer cures into a highly durable, thin film. The protective barrier exhibits balanced structural toughness and flexibility to withstand intense environmental and physical stress without degrading.

Mechanical Properties & Film Flexibility

- **High-Heat Resistance (Heat Seal Test): Passes 230°C (446°F) @ 45 psi for 1 second (face-to-face).** The cured film withstands extreme roof deck temperatures without blistering, melting, or displaying thermal shock degradation.
- **Flexibility:** When applied as a thin film to highly flexible substrates (such as Mylar), the cured coating can be folded completely in half without cracking, delaminating, or losing adhesion. This confirms its ability to flex alongside natural shingle expansion and contraction.
- **Surface Hardness (Pencil Hardness): Surpasses 4H.** A rating exceeding 4H indicates an exceptionally hard finish that provides superior resistance against scratching, gouging, and windborne debris impact.
- **Elasticity & Toughness (König Pendulum Hardness): 150 seconds.** A 150-second pendulum result verifies a perfectly balanced viscoelastic film—offering high structural hardness while maintaining the elasticity necessary to absorb mechanical impacts without marring.

Chemical & Environmental Resistance

- **Ambient Cure Window:** Shingle Shield Max™ relies entirely on ambient room-temperature curing. The applied film achieves excellent waterproofing and rain resistance within a few hours, and reaches full chemical and alkaline resistance in less than 24 hours. *Note: Elevated ambient temperatures will accelerate the development of these resistance properties.*
- **Alkali Resistance:** Following a 24-hour ambient cure, the dry film withstands continuous exposure to a **4% caustic solution soaked for 15 minutes at 110°F (43°C)** without degrading, dulling, or stripping. This ensures compatibility with routine commercial roof cleaning agents and alkaline cleaners.
- **Solvent Resistance:** At a wet film thickness of 1.75 mils cured under ambient conditions for less than 24 hours, the dry film successfully resists **over 20 Isopropyl Alcohol (IPA) rubs** without breaking down or dissolving.

Substrate Adhesion

- **Advanced Resin Adhesion:** Utilizing proprietary PosiCoat™ resin technology, this sealer establishes deep chemical and mechanical anchoring, delivering exceptionally high pull-off adhesion strength across sloped roofing substrates.

Warranty Disclaimer & Limitation of Liability

Product Manufacturing & Entity Details

Shingle Shield Max™ is manufactured by **Vital Coat**, a registered trademark and brand of **NxTech Holdings LLC**.

Disclaimer of Warranties

The technical information, recommendations, and application data contained in this Technical Data Sheet (TDS) are furnished solely as a guide and are provided without warranty, representation, or guarantee of any kind, whether expressed or implied. While the information presented herein is believed to be accurate and reflects the best data available to the manufacturer at the time of publication, NxTech Holdings LLC makes no guarantees regarding its accuracy, completeness, or suitability for specific architectural or field applications.

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