NANOTECH MATERIALS

Cool Roof Coat

Application & Technical Manual



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Welcome Message

For the waterproofing and roof restoration market, **NanoTech Materials Cool Roof Coat** offers an alternative to traditional roof replacement and restoration methods, with heat rejection properties that exceed those of any other protective roof coating on the market. As a high-performance, elastic polymeric protective coating, ASTM tested to Miami-Dade County standards, NanoTech Materials Cool Roof Coat stands up to the most grueling weather conditions, making it a long-lasting alternative to full roof replacement with the added benefit of unprecedented energy efficiency for the building.

About NanoTech Materials

NanoTech Materials, Inc. has revolutionized the science of heat control by integrating its novel Insulative Ceramic Particle™ into common building materials, coatings, and substrates to give them industry-breakthrough heat conservation, rejection, or containment properties. NanoTech products include heat-rejecting roof coatings for buildings, heat-containment fireproofing coatings to protect critical infrastructure from wildfires, and specialized ceramics to contain extreme heat in industrial applications.

NanoTech's Cool Roof Coating represents a paradigm shift in roof technology, going beyond the standard Solar Reflectance Index (SRI) metrics by incorporating its Insulative Ceramic Particle™ to significantly reduce heat transfer.

Disclaimer

NanoTech Materials specializes in the manufacturing and distribution of roofing materials and is not engaged in architecture or engineering services. NanoTech Materials bears no responsibility for the performance of its products in cases where damage is attributed to factors such as improper building design or construction defects.

The responsibility for design remains with the architect, engineer, roofing contractor, or owner. The construction details provided in this manual serve as guidance and should not be interpreted as exhaustive. They are not a substitute for sound application practices.

The information presented in this manual is offered in good faith and, to the best of NanoTech Materials' knowledge, does not infringe upon any patents, whether domestic or foreign.

NanoTech Materials continuously strives to enhance the performance of its products and periodically updates its products and application specifications. The company retains the right to modify, at its discretion, any of the information, requirements, specifications, or policies provided herein. This manual supersedes all previous catalogs and manuals.

1.0 Substrate Preparation

General Substrate Conditions

Preparation of the roof is the duty of the installer, who is tasked with identifying and rectifying all conditions outlined in this section.

- Inspect the base surfaces where new roofing will be applied. NanoTech Materials requires an adhesion test to be performed during the inspection of all roof remediation candidates.
- Do not commence the installation of the NanoTech Materials coating system until its compatibility and adhesion have been confirmed through test patches, all preparatory tasks have been completed, and any unsatisfactory conditions have been addressed.
- Ensure proper water drainage from the roof. The roof should not retain water for over 48 hours following the cessation of precipitation. NanoTech Materials defines “ponding” as water that remains on the roof surface for more than 48 hours after the end of precipitation. Ponding may also occur due to other water sources, such as improperly routed air conditioning condensate and steam condensate lines.
- Shield nearby surfaces that will not receive the coating.
- Refrain from applying liquid-applied roofing products to surfaces deemed unsuitable by NanoTech Materials or under adverse environmental conditions, as defined in individual spec sheets.
- The roof must be clean, dry, and devoid of any debris prior to the application of any liquid-applied products. NanoTech Materials liquid-applied roofing products are not intended for use on substrates subject to heavy foot traffic. In cases where substantial foot traffic is anticipated, utilize a rooftop walkway system approved by NanoTech Materials.

Always contact NanoTech Material’s Technical Sales Support Services at (888) 296-6266 for questions. NanoTech must approve exposure to any chemicals or products such as those used to clean mechanical equipment.

Proper Preparation

For the correct application of the coating, it’s crucial to thoroughly clean the existing roof. All accumulated dust, chalky residue, exposed bitumen, greases, oils, and any other loose materials must be eliminated before applying the coating. It is imperative to avoid solvent-based cleaners when preparing a roofing substrate for the application of the NanoTech Materials Cool Roof Coat. A pressure washer is the only approved cleaning mechanism.

Should pressure washing fail to fully clean the roof, contact the Nanotech Materials support team prior to applying a cleaning agent, to check for chemical compatibility with the coating. Exercise caution during pressure washing to maintain the integrity of the existing roof covering and to prevent damage, particularly to adhered seam areas. The roof should be completely dry before initiating any priming or coating process.

Depending on the results of the adhesion test, the use of a primer might be necessary. Any essential repairs to the roof or flashings should be carried out and given sufficient time to cure where needed. For more detailed information on roof preparation, consult specific sections of this manual.

Existing Roof Substrate Inspection

The roof surface shall be inspected for blisters, ridges, mole runs, unadhered membranes, or in the case of metal roofing rust and pitted metal. All surface defects must be corrected to industry standards as established by the manufacturer or NRCA Repair Manual. Other sources may be submitted for NanoTech’s approval.

Underneath membrane roofing systems, there is usually a layer of insulation. Should the roof have experienced leaks in the past, it’s possible that wet insulation may exist within the current roofing structure. Any damp roof insulation must be identified, removed, and replaced before the coating process. While some sections of wet insulation might be detectable simply by feeling the surface as you walk, conducting a moisture survey or core sample analysis is advisable for a more precise identification of these areas.

Metal roofs are typically mounted over a solid roofing deck or above purlins and insulation. Inspecting the lower side of the roof deck can help in spotting regions of wet insulation, a deteriorated deck, or other damages that require attention and repair before proceeding with the coating.

Moisture Survey

The contractor is responsible for ensuring there is no subsurface moisture present and any insulation remains dimensionally sound. A suitable moisture survey method is to be approved by NanoTech and all moisture identified removed. Additionally, an underside inspection is to be conducted to ensure there are no visible defects or structural concerns.

Repair Standards

Challenges identified from the inspections described above will be corrected. The section outlined below provides general corrective

procedures and are not necessarily comprehensive or complete. The standard of repair will include one or more of the following: manufacturer's published requirements, National Roofing Contractor Association's Repair Manual, or other industry standard submitted and approved in writing by NanoTech.

Metal

Areas of Concern	Treatment
Excessive Gaps	Seal cracks, joints, penetrations, and curbs with NanoTech Roof Sealant and Fabric (3-course) as recommended. See Technical Data Sheet for details and spread rates.
Rust Areas	• Replace severely damaged or rusted panel and fasteners. Replace roof panels with holes due to extensive corrosion. • Treat light rust areas NanoTech Rust Inhibiting Primer. See Technical Data Sheet for details and coverage rates.
Seams	Treat all seams with NanoTech TriSeam. See Technical Data Sheet for details and coverage rates.
Fasteners	• Remove and replace all free-spinning fasteners with oversized with neoprene washers. • Fully encapsulate all fasteners with NanoTech Roof Sealant. See Technical Data Sheet for details and spread rates.
Dented / Damaged Panels	• Mechanically remove dents as much as possible. • Replace severely damaged roof panels.
Open Ridge Vents	• Replace or install sheet metal caps over open ridge vents if rust is inside or the roof is in a harsh environment (e.g., saltwater areas). • Ensure not to seal weep holes on vents.

Damaged Substrate Treatment: Non-Metal

Areas of Concern	Treatment
Spray Polyurethane Foam	• Scarify and re-foam areas where urethane foam has degraded to create a smooth substrate. • Remove and re-foam any wet/damaged foam areas.
EPDM	• Repair areas where EPDM is torn, cracked, or buckled using compatible materials. Replace any wet insulation. • Allow at least 48 hours drying time before applying liquid-applied products.
PVC	• Repair areas where PVC is torn, cracked, or buckled using compatible materials. Replace any wet insulation. • Allow at least 48 hours drying time before applying liquid-applied products.
Granular Surfaced BUR or Modified Bitumen (SBS & APP) OR Smooth Surfaced BUR or Modified Bitumen (SBS & APP)	• Remove and repair blistered, buckled, wet, or damaged asphaltic membranes using compatible materials. • New BUR or modified bitumen repair materials must weather for at least 30 days before applying liquid- applied products. • Repair significant cracks (gaps 1/16" [1.6 mm] or greater) using NanoTech Roof Sealant. • Allow NanoTech Roof Sealant at least 8 hours drying time or dry to touch before application; thicker applications may require more. • Gravel-surfaced BUR is not suitable for liquid-applied coating.
TPO	• Repair areas where TPO is torn, cracked, or buckled using compatible materials. • Replace any wet insulation. Allow at least 48 hours drying time after cleaning before applying liquid-applied products.
General Surface Prep	• Clean and prepare surfaces for liquid-applied roofing products. Remove dirt, dust, loose particles, grease, oil, laitance, pollution fallout, and contaminants. • Use a stiff bristle push broom and/or pressure washing for cleaning.
Pressure Washing	• Pressure-wash substrate with water/approved cleaner as per Cleaner & Primer Guide. • Minimum working pressure of 2,000 psi for most substrates; 3,000 psi for concrete, EPDM, and metal. • Avoid damaging roof surface or injecting water into substrate. • Allow at least 48 hours drying time before applying liquid-applied products.

Environmental Considerations	• Corrugated or structural transite panels may contain asbestos, which can be hazardous when pressure-washed. It's the Installer's responsibility to check for proper disposal and worker protection. • Use roof wash-off catchment systems where required. Follow state and local requirements for catchments during cleaning.

Substrate Preparation: Metal

Areas of Concern	Treatment
Pre-Finished Metal Panels	• For roof panels with fluoropolymers, or silicone, conduct adhesion tests determine the need for priming. • Apply primer per specifications if necessary.
Sealer Pockets	Apply NanoTech Materials TriSeam, encapsulating entire pocket.
Ponding Water Areas	• Remove existing roof membrane. Install tapered insulation. Install membrane of like material over newly installed tapered insulation, ensuring watertight integrity. • Treat unresolvable ponding water areas with NanoTech Materials Sub Slope Silicone prior to applying other coatings.
Gutter Straps	Fully encapsulate all gutter straps fastened above roof panels with NanoTech Materials TriSeam including the fasteners.
Neoprene Pipe Boots	• Install neoprene pipe boots before flashing work for certain pipe penetrations. • Seal boots to the roof with NanoTech Materials TriSeam before mechanically fastening.
Ridge Caps	• Flash all ridge caps with recommended coating and fabric. • Fill voids/open areas in ridge cap with polyurethane foam or backer rod before applying coating and fabric. For "Z" closures near ridge cap edge, remove exposed sealant and apply seam coating liberally to all sides where they intersect with both the roof panel and ridge cap.
Crickets	• Install sheet metal crickets as per manufacturer's specifications. • Seal new crickets with approved sealant under the flanges before mechanically fastening to the curb unit and metal roof panel. • Stitch-screw cricket flanges to the curb unit and metal roof panel while the approved sealant is still wet using fasteners.
Condensate Lines	• Install condensate lines from HVAC units to gutters as part of the drainage system, adhering to local building codes. • Wood blocking wrapped in membrane should be used to support lines.
Residual Asphalt	Remove any existing asphaltic roof coating. Coat any residual asphalt with the recommended coating/primer for the specific system.
Skylights	• Treat curb skylights as curb flashings. Seal skylight curbs with NanoTech Cool Roof Coat (12 WFT minimum). • For polycarbonate corrugated skylights apply NanoTech Skylight Sealer over total skylight, overlapping onto the newly applied NanoTech Cool Roof Coat by 6".
Penetrations	• Apply NanoTech Roof Sealant and fabric around the base of all penetrations, embedding a minimum 12" (305 mm) width fabric between two coating layers, extending 6" (152 mm) up the vertical and 6" (305 mm) onto the base. • Cut fabric to fit the shape of the penetration to avoid wrinkles.
Rakes	• Seal all fixed rake details with at least 12" (305 mm) of NanoTech Roof Sealant and fabric, embedding fabric between two coating layers, extending 6" (152 mm) up the vertical and 6" (152 mm) onto the base. • If fixed rake metal is fastened atop roof panel ribs, trim excess metal and follow horizontal seam flashing procedures. • Fill all voids/open areas with polyurethane foam before applying coating and fabric.
Curb Flashings	Seal curb flashings with NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.
Parapet Walls	Apply NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.

Cinch Straps at Panel End Laps	• Re-tighten cinch straps as needed. • Surround each strap and fastener head with a bead of NanoTech Materials Roof Sealant. • Inject sealant into the cinch strap water channel, then seal the entire lap, strap, and fastener heads with a minimum 12” (305 mm) width NanoTech Roof Sealant.
Corrugated Seam	Seal all vertical seams of corrugated panels with NanoTech Materials TriSeam. Feather the coating until seams are no longer visible, brushing parallel to the seam.
Horizontal Seam	Apply NanoTech Materials TriSeam.

Substrate Preparation: PVC

Areas of Concern	Treatment
Penetrations	• Around all penetration bases, apply NanoTech Materials Roof Sealant and fabric, ensuring a fabric width of at least 12” (305 mm) between two coating layers, extending 6” (152 mm) up the vertical and 6” (305 mm) onto the base. • Shape the fabric to fit the contours of the penetration, ensuring it is wrinkle-free.
Skylights	Treat curb skylights as curb flashings. Seal skylight curbs with NanoTech Cool Roof Coat (12 WFT minimum). Apply NanoTech Skylight Sealer to all translucent surfaces.
Condensate Lines	• Install condensate lines from HVAC units to gutters as part of the drainage system, adhering to local building codes. • Wood blocking wrapped in membrane should be used to support lines.
Sealer Pockets	Apply NanoTech Materials TriSeam, encapsulating entire pocket.
Parapet Walls/Curb Flashings	Apply NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.

Damaged Substrate Treatment: Non-Metal

Areas of Concern	Treatment
Wood OSB/Plywood/Tongue & Groove	• Remove and repair areas with rotten, wet, or damaged substrate using similar products. • Fill gaps greater than 1/4” [6mm] between roof panels/penetrations with NanoTech Materials Roof Sealant. • Retighten or replace all necessary fasteners. • Replace stripped fasteners with oversized. • Replace all deteriorated and missing fasteners. • Fully encapsulate fasteners with NanoTech Materials Roof Sealant.
Spray Polyurethane Foam	• Scarify and re-foam areas where urethane foam has degraded to create a smooth substrate. • Remove and re-foam any wet/damaged foam areas.
EPDM	• Repair areas where EPDM is torn, cracked, or buckled using compatible materials. Replace any wet insulation. • Allow at least 48 hours drying time before applying liquid-applied products.
PVC	• Repair areas where PVC is torn, cracked, or buckled using compatible materials. Replace any wet insulation. • Allow at least 48 hours drying time before applying liquid-applied products.
Granule Surfaced BUR or Modified Bitumen (SBS & APP) OR Smooth Surfaced BUR or Modified Bitumen (SBS & APP)	• Remove and repair blistered, buckled, wet, or damaged asphaltic membranes using compatible materials. • New BUR or modified bitumen repair materials must weather for at least 30 days before applying liquid- applied products. • Repair significant cracks (gaps 1/16” [1.6 mm] or greater) using flashing grade coating. • Allow NanoTech Materials Roof Sealant at least 8 hours drying time before application; thicker applications may require more. • Gravel-surfaced BUR is not suitable for liquid-applied coating.

Corrugated Structural Transite Panels	• Fill gaps greater than 1/4” [6 mm] with closed-cell foam strips or polyurethane foam. • Retighten or replace all necessary fasteners. • Replace stripped fasteners with oversized and neoprene washers. • Replace all deteriorated or missing fasteners. • Fully encapsulate fasteners with NanoTech Materials Roof Sealant • Repair all horizontal seams as needed. • Consult the Seam Treatment Guide. • Note potential asbestos content. • See Environmental Considerations in Cleaning Procedures for more information.
TPO	• Repair areas where TPO is torn, cracked, or buckled using compatible materials. • Replace any wet insulation. Allow at least 48 hours drying time after cleaning before applying liquid-applied products.

Substrate Preparation: TPO

Areas of Concern	Treatment
Penetrations	• Apply NanoTech Materials Roof Sealant and fabric around the base of all roof penetrations, embedding a 12” (305 mm) width of fabric between two layers of the coating, extending 6” (152 mm) vertically and 6” (305 mm) onto the base. • Shape the fabric to fit the penetration contour to prevent creasing.
Skylights	Treat curb skylights as curb flashings. Seal skylight curbs with NanoTech Cool Roof Coat (12 WFT minimum). Apply NanoTech Skylight Sealer to all translucent surfaces.
Condensate Lines	• Install condensate lines from HVAC units to gutters as part of the drainage system, adhering to local building codes. • Wood blocking wrapped in membrane should be used to support lines.
Sealer Pockets	Encapsulate entire sealer pocket with NanoTech Materials TriSeam
Parapet Walls/Curb Flashings	Apply NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.

Substrate Preparation: EPDM

Areas of Concern	Treatment
Penetrations	• Apply NanoTech Materials Roof Sealant and fabric around the base of all roof penetrations, embedding a 12” (305 mm) width of fabric between two layers of the coating, extending 6” (152 mm) vertically and 6” (305 mm) onto the base. • Shape the fabric to fit the penetration contour to prevent creasing.
Skylights	Treat curb skylights as curb flashings. Seal skylight curbs with NanoTech Cool Roof Coat (12 WFT minimum). Apply NanoTech Skylight Sealer to all translucent surfaces.
Condensate Lines	• Install condensate lines from HVAC units to gutters as part of the drainage system, adhering to local building codes. • Wood blocking wrapped in membrane should be used to support lines.
Sealer Pockets	Encapsulate entire sealer pocket with NanoTech Materials TriSeam
Parapet Walls/Curb Flashings	Apply NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.

Substrate Preparation: Asphaltic (Smooth and Granulated)

Areas of Concern	Treatment
Penetrations	• Apply NanoTech Materials Roof Sealant and fabric around the base of all roof penetrations, embedding a 12” (305 mm) width of fabric between two layers of the coating, extending 6” (152 mm) vertically and 6” (305 mm) onto the base. • Shape the fabric to fit the penetration contour to prevent creasing.
Skylights	Treat curb skylights as curb flashings. Seal skylight curbs with NanoTech Cool Roof Coat (12 WFT minimum). Apply NanoTech Skylight Sealer to all translucent surfaces.

Condensate Lines	• Install condensate lines from HVAC units to gutters as part of the drainage system, adhering to local building codes. • Wood blocking wrapped in membrane should be used to support lines.
Sealer Pockets	Encapsulate entire sealer pocket with NanoTech Materials TriSeam
Parapet Walls/Curb Flashings	Apply NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.

Substrate Preparation: Structural Concrete

Areas of Concern	Treatment
Penetrations	• Apply NanoTech Materials Roof Sealant and fabric around the base of all roof penetrations, embedding a 12” (305 mm) width of fabric between two layers of the coating, extending 6” (152 mm) vertically and 6” (305 mm) onto the base. • Shape the fabric to fit the penetration contour to prevent creasing.
Skylights	Treat curb skylights as curb flashings. Seal skylight curbs with NanoTech Cool Roof Coat (12 WFT minimum). Apply NanoTech Skylight Sealer to all translucent surfaces.
Condensate Lines	• Install condensate lines from HVAC units to gutters as part of the drainage system, adhering to local building codes. • Wood blocking wrapped in membrane should be used to support lines.
Sealer Pockets	Encapsulate entire sealer pocket with NanoTech Materials TriSeam
Parapet Walls/Curb Flashings	Apply NanoTech Cool Roof Coat (12 WFT minimum) to the highest point possible.

Adhesion Testing

Adhesion testing is typically carried out to ascertain the compatibility of a base surface for the application of a liquid- applied coating system. NanoTech Materials requires an adhesion test to be performed on all roofing substrates prior to the application of the coating. The use of NanoTech Primer is required for any substrate which fails an adhesion test. The adhesion test must be repeated once the primer has been applied. If the adhesion test fails a second time, the application is to be rejected.

When conducting adhesion tests:

- The test patches should be clearly marked and photographed to record the outcomes of the adhesion tests.
- For warrantied projects, video documentation of adhesion testing must be submitted to NanoTech prior to warranty issuance.
- For insights regarding the outcomes of adhesion tests, installers can reach out to NanoTech Materials’ Technical Sales Support Services

NanoTech Recommends the following test method:

Field Peel Adhesion

Overview: The ASTM D903 “Peel Adhesion” test is a standard procedure in roof coating guidelines, particularly effective for onsite testing with elastomeric materials. This test, along with a similar one, ASTM D3359 “Tape Adhesion,” is applicable for evaluating primers and enamels.

Preparation:

- Create a sample section of the intended coating system on the current roof surface. Execute any required mechanical surface preparations.
- Replicate cleaning processes via power washing.
- Coat 6” by 2” of the substrate with a single layer of the NanoTech Materials Cool Roof Coat.
- Set up at least three (3) test patches for the initial 100 squares and an additional patch for each subsequent 100 squares in various areas of the roof to test adhesion for any doubtful roof substrates.

Test Method:

- Insert approximately 6” (152 mm) of a precut 1” (25 mm) x 12” (305 mm) fabric strip into the wet coating. Keep an extra 6” (152 mm) of the fabric strip free for pulling during the test.
- Add another coating layer to cover the moistened section of the fabric.
- Allow sufficient drying time, which can range from 8 hours to 48 hours depending on the weather. Ensure the test patch is not exposed to rain during the cure time.

Evaluation:

- Employ a force gauge, such as a digital fish scale or a trigger pressure gauge.
- Utilize a loop, staple, or clamp to secure the fabric to the gauge.
- Gently pull the fabric straight upwards at a 90-degree angle; the average force should exceed 2 PLI (Pounds per linear inch of fabric width).

2.0 General Installation

THESE ARE GENERAL INSTALLATION INSTRUCTIONS. REFER TO THE ROOF SUBSTRATE SPECIFICATION FOR MORE DETAILS ON INSTALLATION

Technical Advice

The application of this coating should be executed with guidance from the manufacturer's technical representative. For assistance, contact NanoTech Materials Technical Services.

Repairs

Address all leaks and seal flashings on the existing substrate using comparable materials as suggested by the original manufacturer prior to the application of NanoTech Materials Roof Coatings. Areas repaired recently may necessitate an appropriate primer. For primer suggestions, consult the NanoTech Materials ancillary systems list.

Seams, Penetrations and Detail Work

- Use NanoTech Materials Roof Sealant, applying it via brush or roller with a minimum width of 6 in (152 mm) over the seam at a rate of at least ½ gallon per 100 sqft. Immediately place a 4 in (102 mm) strip of Reinforcing Polyester Mesh Tape into the wet coating, ensuring full integration into the coating. The Reinforcing Polyester Mesh Tape should be laid out smoothly, devoid of wrinkles, "fish mouths," blisters, or pinholes.
  *As an alternative to conventional 3-course, it is recommended to apply NanoTech Materials TriSeam at a rate of 2 gallons per 100 linear feet.
- Once the initial coating with the embedded fabric is firm to touch, add another layer of NanoTech Materials Roof Coating at a minimum of ½ gallon per 100 sqft for thorough encapsulation of the tape. Allow a drying time of at least 4 – 6 hours (in conditions of 75°F (24°C) and 50% RH) before progressing to the subsequent installation step. Be aware that lower temperatures or higher humidity can prolong drying times. Do not apply NanoTech Materials Roof Coating if rain or heavy dew is anticipated within 8 hours. Aim to apply the product in the morning for optimal drying time during daylight. The product should be walkable in 90 minutes.

Roof Equipment (HVAC / Sleepers)

Units resting on 4 in x 4 in (101.6 mm x 101.6 mm) wooden sleepers should be raised to allow for cleaning, priming (as necessary per adhesion test results), and coating of the membrane beneath them as per the guidelines in this document. A protective slip sheet should be placed under the sleepers to safeguard the coating system. If units are not elevated from the deck to facilitate this process, the unaddressed area will be exempt from warranty coverage.

Primer

Should adhesion tests indicate a need for primer, apply the NanoTech Materials primer approved for the substrate (for example, NanoTech Materials TPO Primer on TPO membranes, or NanoTech Materials Rust Inhibiting Primer on galvanized, phosphated, or non-painted metal) in accordance with instructions, avoiding any pooling on the surface. Apply at the coverage rate listed for that primer in Section 14.2. The primer can be applied using one of the following methods: brush, roller, or sprayer. Be mindful to prevent puddling when spraying. Allow the approved Primer to dry completely. Drying times can vary and are dependent on ambient conditions.

Product Circulation Guidelines

- This is a high-solids, acrylic emulsion formulation that is a non-Newtonian fluid. This means that the product must be thoroughly agitated to lower its viscosity from a solid state to a liquid state. If the product is left standing in the packaging, or in the application machine, or any container after agitation for more than 45 minutes, it must be agitated again to prevent its viscosity from increasing back to a solid state from a liquid state.
- Follow these simple guidelines:
  - 5-gallon buckets: Agitate the product using a helicoidal paddle and a mixer with high rpm capability for at least 10 minutes. If the product has been left standing in the bucket for more than 45 minutes, re-agitate for 5 to 10 minutes.
  - 55-gallon drums: Agitate the product for a minimum of 45 minutes before use. Re-agitate if the product has been left standing for more than 45 minutes.
  - Totes: Agitate the product using an EvenMix dual-paddle tote mixer for a minimum of 45 minutes before use. Re-agitate if the product has been left standing for more than 45 minutes.
- The life of the product after being opened and resealed is 30 days or less, depending on how well the leftover product has been sealed in a container that does not allow air circulation. Inspect and remove any cured resin or solid bits from a used bucket, if any, before using leftover product and follow agitation guidelines.

First Coat

- Apply NanoTech Materials Cool Roof Coating at the rate required for the specified warranty system (see Minimum Dry Film Thickness Requirement below and Section 14.1). A single pass must not exceed 2.5 gal/100 ft², which produces approximately 40 wet mils (WFT). For the 10-year system, the full 2.0 gal/100 ft² (32 WFT) is applied in this single pass. NanoTech Materials Roof Coating can be applied with a 3/8 in (10 mm) nap roller, brush, or airless sprayer. Ensure all surfaces are coated, including expansion joint covers and flashings. Apply an extra coat around all edges and penetrations. Adjust drying times as necessary for environmental conditions (see note below).

Second Coat (15- and 20-Year Systems)

For 15-year and 20-year systems, apply a second pass of NanoTech Materials Cool Roof Coating to reach the specified total thickness (for example, the 20-year system is applied as approximately 2.0 gal/100 ft² followed by approximately 2.5 gal/100 ft²). Do not exceed 2.5 gal/100 ft² (approximately 40 WFT) in any single pass. Follow the same application techniques as the first coat. Allow sufficient drying time, adjusting for environmental factors.

NOTE: MINIMUM DRY TIME PER COAT IS 8 HOURS AT 75°F (24°C) AND 50% RH. Expect longer drying times in cooler temperatures or higher humidity. Avoid applying NanoTech Materials Cool Roof Coat if rain or heavy dew is expected within 8 hours. The product should be walkable in 90 minutes.

NOTE ON AIRLESS:

- Use 2,500 – 3,000 psi (17.2 MPa – 20.7 MPa) at the gun tip, with a flow rate of 1.6 –3.0 gal/min (3.8 L – 11.4 L/min) and tip sizes ranging from 0.025 – 0.040 in (0.64 – 1 mm). Larger spray units are beneficial for longer hoses on bigger projects. For assistance in selecting the best equipment for specific project needs, contact Technical Services.
- Any deviations from the specified standards identified by the Applicator or the owner's representative must be rectified by the Applicator.

Recommended Equipment for Application (Sprayer)

Please check Section 13.0 for application equipment.

Recommended Equipment for Application (Roller)

- Paint roller
- Paint brush
- Wet Mil Gage

Cleaning and Usage

- Clean the spraying machine immediately after use to avoid curing of the resin inside the pump and the hose. Follow the manufacturer's standards on cleaning procedures.
- Use and service the spraying machine following the manufacturer's recommendations.

Minimum Dry Film Thickness (DFT) Requirement

- The minimum dry film thickness (DFT) depends on the warranty system specified. NanoTech Materials Cool Roof Coat is 71.8% solids by volume, so the cured dry film thickness is approximately 71.8% of the applied wet film thickness (DFT = WFT × 0.718), a nominal reduction of about 28%.
- 10-year system: 2.0 gal/100 ft² in one pass; 32 WFT / 23 DFT*.
- 15-year system: 3.5 gal/100 ft² in two passes; 56 WFT / 40 DFT*.
- 20-year system: 4.5 gal/100 ft² in two passes (approximately 32 + 40 WFT); 72 WFT / 52 DFT*. Metal roof systems: 4.0 gal/100 ft² in two passes (approximately 32 + 32 WFT); 64 WFT / 46 DFT* (see Section 3.0).
- *Approximate; rounded to the nearest whole mil. Maximum 40 WFT (2.5 gal/100 ft²) per pass. Exact calculated values are listed in Section 14.1.
- The coated surface should not be subjected to foot traffic for at least three (3) days following application. Any damage caused to the surface by other trades will not be the responsibility of the Applicator.

Additional Product Details

Qualification for Contractors

The Contractor shall be a certified applicator of Nanotech Materials' Cool Roof coatings product and recommends that the applicator have a minimum of three years of experience applying elastomeric roof coatings. NanoTech applicators are required to follow all OSHA safety standards. Nonetheless, NanoTech, at its sole discretion, reserves the right to decide if a Contractor meets the level of experience necessary to be registered as a certified applicator.

Testing and Labeling

The NanoTech Cool Roof Coat is produced in NanoTech facilities certified to the ISO9001:2015 quality management standards. Routine in-house and third-party laboratory testing is performed, and full traceability of all product components is maintained. Any questions or concerns related to the product and or its application should be directed to info@nanotechmaterials.com . Please include the LOT # information from the product label.

Product Warranty

- Please check Section 12.1 for the product warranty. For warrantied projects, video documentation of adhesion testing must be submitted to NanoTech prior to warranty issuance.

Product Handling and Storage

For safe handling of this product read the SDS and TDS and follow these guidelines:

- Avoid breathing the material.
- Use only in a well-ventilated area.
- As with all chemicals, good industrial hygiene practices should be followed when handling this material. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

For Storing this Product

- Store in a cool (40–100°F), dry place, and not exposed to the elements.
- Keep container(s) closed when not in use.
- Store locked up.
- Store in a well-ventilated place.
- Keep cool.
- Storage temperature: 40-100°F.
- Keep only in the original container.
- Protect against the elements. 3.0 Metal Roof Systems

3.0 Product Quick Specifications

3.1 Metal Roof Systems

Refer to the current NanoTech Materials Cool Roof Coat Metal Roof Systems Quick Specification for information before use. The current Quick Specification is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

3.2 Modified Bitumen Systems

Refer to the current NanoTech Materials Cool Roof Coat Modified Bitumen Systems Quick Specification for information before use. The current Quick Specification is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

3.3 PVC Single-Ply Systems

Refer to the current NanoTech Materials Cool Roof Coat PVC Single-Ply Systems Quick Specification for information before use. The current Quick Specification is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

3.4 TPO Single-Ply Systems

Refer to the current NanoTech Materials Cool Roof Coat TPO Single-Ply Systems Quick Specification for information before use. The current Quick Specification is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

3.5 EPDM Single-Ply Systems

Refer to the current NanoTech Materials Cool Roof Coat EPDM Single-Ply Systems Quick Specification for information before use. The current Quick Specification is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

3.6 Structural Concrete System

Refer to the current NanoTech Materials Cool Roof Coat Structural Concrete Systems Quick Specification for information before use. The current Quick Specification is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

4.0 Technical and Safety Data Sheets

4.1 Technical Data Sheet

Refer to the current NanoTech Materials Cool Roof Coat Technical Data Sheet (TDS) for information before use. The current TDS is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

4.2 Safety Data Sheet

Refer to the current NanoTech Materials Cool Roof Coat Safety Data Sheet (SDS) for health, safety, handling, and disposal information before use. The current SDS is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

5.0 ASTM Testing

ASTM Certifications for ICC, CRRC, and Miami-Dade

Tested by accredited 3rd party lab for Miami-Dade.

NanoTech Testing Parameters

Test Parameter	ASTM D6083 Type I	ASTM D6083 Type II	Result
Viscosity - ASTM D2196	12,000-85,000 cP	2000-100,000 cP	Pass (43,000 cP)
Volume Solids - ASTM D2697	Greater than 50%	Greater Than 45%	Pass
Weight Solids - ASTM D1644	Greater than 60%	Greater Than 50%	Pass
% Elongation (Initial) - ASTM D2370	Min. 100%	Min. 100%	Pass (312%)
Tensile Strength (Initial) - ASTM D2370	Min. 200 psi	Min. 200 psi	Pass
% Elongation (1,000 hours - ASTM D2370	Min. 100%	Min. 100%	Pass
Permeance - ASTM D1653	Max. 50 perms	Max. 50 perms	Pass
Water Swelling - ASTM D471	Max. 20% (mass)	Max. 20% (mass)	Pass (0.049)
Peel Strength - ASTM D903	2.0 lbf/in (wet)	2.0 lbf/in (wet)	Pass (16.3 lbf/in)
Fungi Resistance - ASTM G21	Zero Rating	Zero Rating	Pass (0 rating)
Tear Resistance - ASTM D624	Greater than 60 lbf/in	Greater Than 60 lbf/in	Pass (77.6 lbf/in)
Low Temperature Flexibility -(1,000 hours) - ASTM D522	Min. ½ in. at -26°C	Min. ½ in. at -10	Pass
Accelerated Weathering (1,000 hours) -ASTM D4798	No cracking or checking	No cracking or checking	Pass
Surface Burning – ASTM E84	Flame index spread = 5		Class A
	Smoke Developed Index = 15		
Hail Testing – TAS 114	Product meets the performance requirements to withstand a moderate hail event		Class MH

6.0 Warranty, Care and Preventative Maintenance

6.1 Limited Product Warranty

Refer to the current NanoTech Materials Cool Roof Coat Limited Product Warranty for warranty information. The current Limited Product Warranty: Cool Roof Coat is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

6.2 Warranty Application

Refer to the current NanoTech Materials Cool Roof Coat Warranty Application. The current Warranty Application is available from NanoTech Materials at NanoTechMaterials.com or info@nanotechmaterials.com.

6.3 Care & Preventative Maintenance

Overview

A roof, constantly exposed to various weather elements like heat, cold, UV rays, and physical damage, is often one of the most vulnerable parts of a building's exterior. However, its long-term performance can be significantly enhanced through proper design, quality materials, correct installation, skilled workmanship, and a thorough maintenance program. The investment in a comprehensive maintenance plan is considerably less than the costs associated with repairing or replacing a damaged roofing system.

As a crucial component of the building envelope, the roofing system requires careful attention. Early identification and resolution of potential issues are key to preventing minor problems from escalating. Regular maintenance not only maintains the roof's integrity but also protects the building's contents and minimizes disruptions to its use. Consistent and detailed maintenance schedules can prolong the life of the roofing system and reduce overall life cycle and replacement costs.

Understanding the Importance of Proper Roof Maintenance and Repair

All roofing systems, including those that are coated, necessitate routine maintenance and repair. The Roof Coatings Manufacturers Association (RCMA) suggests inspecting roofs and coatings twice yearly, typically in spring and fall, as well as after significant weather events. Additional coating should be applied as needed to repair damage to the coating or the underlying roofing substrate. Application of extra coating is also advisable where the existing coating is worn thin. NanoTech Materials requires the application of a 23 mil (DFT) topcoat at the ten year inspection mark, in order to recertify the roof for another ten years.

General Care and Maintenance Recommendations

For optimal performance of the roofing system, consider the following general care and maintenance tips:

- Ensure proper drainage to reduce standing water on the roof. Keep the roof surface clear of leaves, pine needles, twigs, paper, dirt, and other debris that might clog drains. Trim back trees or branches that are too close to the roof. Standing water on the roof increases the likelihood of moisture infiltration in case of punctures or other mechanical damage to the roofing membrane.
- Regularly inspect the building's exterior for signs of settlement or movement. Cracks in walls could indicate potential issues with the roof substrate and flashing. Check the condition of overhangs, cornices, fascia, and edging.
- Protect the roofing system from substances that could cause early degradation of the coating or membrane, such as:
  - Petroleum-based liquids
  - Solvents
  - Grease from rooftop units or restaurant vents
  - Oils (new or old) from air conditioning or compressor units
  - Kitchen waste or animal fats
  - Chemicals – Contact Technical Support Services for information on chemicals incompatible with the coating
- Use catch pans or other protective measures to shield the roofing membrane from exposure to grease, chemicals, and other substances. Spills should be promptly cleaned to prevent swelling and possible degradation of the roofing system.
- Look for signs of algae, mold, mildew, or other plant growth on the roof, especially in shaded areas prone to water retention.
- If snow removal is necessary, use plastic shovels and exercise caution around protrusions or detailed work areas. Avoid using snow blowers, picks, axes, and sharp-edged shovels on the roof.
- Remove any foreign debris like glass, bolts, nails, screws, metal shavings, and other materials that could puncture or cut the liquid-applied coating or roofing system.
- Limit access to the roof. Most roof damage occurs due to unauthorized or uninformed individuals. Access should be restricted to authorized personnel only, and visitors and maintenance personnel should be informed about necessary precautions. Maintain a log of all visitors and maintenance personnel accessing the roof.
- Instruct maintenance personnel to avoid dropping tools and equipment on the coated roof surface to prevent puncturing the

membrane. When working on rooftop HVAC units, antennas, solar panels, satellite dishes, etc., take care not to place tools, metal doors, lids, pans, or sharp objects directly on the coating system surface. Use smooth plywood to protect the coating membrane when moving roof-mounted units or equipment.
- The Building Owner is responsible for repairing any physical damage to the roofing system, either through the original contractor or another certified contractor. Delayed repairs to physical damage can lead to the need for major repairs or replacement of the roof or roof coating system at the Building Owner's expense.

Annual Inspections

- During annual inspections, be aware that the liquid-applied coating can become slippery in wet conditions. Caution is advised when walking on this type of roofing system or coating during or following rainfall, or in the presence of moisture such as dew, frost, or ice. Special attention is needed on lighter colored surfaces where ice or frost may not be as noticeable compared to darker surfaces.
- These involve cleaning and a thorough visual check of the roof coating system. Inspections should assess the overall condition of the coating, as well as the integrity of elements like flashings, vent pipes, protrusions, skylights, drains, gutters, parapet walls and caps, adjoining walls, and mechanical equipment. Additionally, look for signs of biological growth or any other foreign debris.

Preventative Maintenance Program

- This program includes regular inspections and subsequent corrective measures, designed to extend the life of the roofing system. It's advisable to schedule these preventative maintenance inspections in spring and autumn. Preventative maintenance programs are recommended by the manufacturer but are included in the service contract and the responsibility of the installing contractor to coordinate with the end customer.

Additional Inspections

- Beyond regular annual inspections, additional checks should be planned if the roof encounters unusual physical damage or conditions, including but not limited to:
  - Exposure to extreme weather, such as strong winds, hail, or prolonged heavy rain.
  - Extensive water pooling, debris accumulation, and any damage to building components that might lead to moisture penetration of the roofing membrane. In areas affected by severe conditions, check the coating or liquid-applied system for punctures, tears, abrasions, or detachment.
  - Following repair or replacement of rooftop equipment or during other activities by different trades that could potentially damage the roof.
- It is important to check for spills, debris, sharp objects, punctures, excessive wear, or other damage caused by heavy traffic or alterations to the roof.

Cleaning Procedures

WARNING: Be cautious of the slippery nature of the liquid-applied coating when wet, especially during cleaning.

- Clear the roof of rocks, branches, leaves, pine needles, and other foreign materials, as well as dirt build-up near drains and other low points. Utilize tools like a plastic rake or a medium-bristle brush for debris removal, applying minimal pressure. Clear any blockages from drains, gutters, and downspouts, ensuring downspouts on multi-level roofs do not discharge directly onto the coated surface below. Trim overhanging trees to reduce leaf and pine needle accumulation and allow sunlight to reach the roof, aiding in the prevention of mildew and algae growth.
- Generously apply diluted Cleaning Concentrate (1 part concentrate to 10 parts water) at low pressure to a section of the roof, using about 0.4 to 0.7 gallons per 100 ft^2 (1.6 to 2.9 L/m^2). Let the cleaner sit for at least 15 minutes. Ensure areas with algae, mold, or mildew are thoroughly soaked. These spots should also be scrubbed with a medium to stiff bristle brush for optimal removal.
- Rinse using a pressure washer (1,200 to 1,500 psi) with clean water directed towards drains. Employ a fan tip on the wand, maintaining a minimum distance of 12 inches (305 mm) from the roof surface. Additional scrubbing with a broom or cleaning pad may be required in dirtier low areas.

IMPORTANT: Use roof wash-off catchment systems where necessary and comply with local and state regulations during the cleaning process.

Pre-Inspection

- Before conducting the roof inspection, it's essential to prepare a detailed roof plan to document any defects and observations.
- Inspect the underside of the deck (if accessible) and the exterior of the building before accessing the roof. Look for indications of excessive moisture, staining, or deterioration. These signs can provide insights into not just roof-related issues but also other factors impacting the overall performance of the building envelope.

Area of Concern	Treatment
Parapet Walls & Caps	Inspect the interface between the roof deck and parapet walls to verify there are no splits or tears and that the coating membrane is properly adhered and intact. Check parapet walls and caps for cracks or breaks that might allow moisture intrusion beneath the coating system.
Minor Repairs	Areas requiring minor repairs (such as small punctures and tears) identified during the inspection can be fixed with NanoTech Materials Rain Safe Leak Repair or NanoTech Materials Roof Sealant.
Roof Drains & Scuppers	• Confirm that roof drains and scuppers are unobstructed and free from debris for effective drainage. Ensure drain covers are secure and properly fastened. • Check the surrounding coating for integrity and absence of blisters, tears, and delamination.
Protrusions	Scrutinize the reinforced coating around all protrusions, like vent pipes, for splits, tears, or delamination at the base. Confirm proper cap installation on vent pipes and the secure, self-flashing condition of the coating at the top of all protrusions.
Moisture Analysis (optional)	• If there's concern about moisture penetration into the roof substrate due to damage, consider conducting a non-destructive moisture detection survey. • Common methods include nuclear metering and infrared thermography. A moisture meter probe can also be used, though this is destructive and will require repair of the damage.
Skylights	Examine the reinforcement around skylights, ensuring it is intact and free of blisters, tears, and delamination.
Gutters	Maintain clean gutters, clear of debris to promote proper drainage. If drains are coated, inspect the coating for soundness and absence of blisters, tears, and delamination.
Roof Membrane & Flashings	Examine the roof coating membrane to ensure it is intact and undamaged, checking for splits, crazing, and cracking. In areas with standing water, inspect for blisters, delamination, or damage due to biological growth on the coating surface.
Roof Mounted Equipment	Inspect all rooftop equipment to ensure secure attachment to base risers, and that the surrounding coating and reinforcement is sound, free of blisters, tears, and delaminations.
Other Details	Check the condition of bricks and mortar on chimneys, as well as caulking or joints in metal flashings, including copings, counter-flashings, rooftop units, curbs, caps, expansion joints, etc. Repair or replace caulking as needed.

Roof Specific Leak Investigation

On metal decks, it's crucial to identify the orientation of deck flutes and deck slope. Water may seep through the roofing system, travel within the lower flutes of the deck, and cause leaks inside the building, particularly in lower areas.

For concrete decks or projects where existing roofing material remains, leaks might stem from moisture trapped in the original installation.

In roofing assemblies with poor insulation, leaks can result from condensation. Therefore, pinpointing the exact location and frequency of the leak is vital. Efforts should be made to seal any sources of air leakage.

1. Initiate leak investigations with a comprehensive visual inspection of the roof area corresponding to where leaks have been reported inside.
2. Examine key details such as drains, vents, scuppers, HVAC and other roof-mounted equipment, parapets, areas of ponding water, etc. In dry conditions, locations of water pooling can often be identified by residues on the roof membrane.
3. Investigate lower roof areas for moisture beneath the coating system (soft insulation can sometimes be felt when walking over these areas).
4. Inspect mechanical rooftop equipment, drains, skylights, roof hatches, expansion joints, pipes, vents, etc., for any cuts or punctures in the coating membrane.

5. Check metal flashings (edging, coping, expansion joint covers, parapet caps, etc.) for cracks and poorly sealed joints.
6. If the source of the leak isn't visually apparent, wet the system in the suspected leak area and monitor the interior for leaks.
7. An inspection of the deck underside often reveals signs of water leakage and/or air infiltration.

Emergency Repairs

NanoTech Materials must be informed of any leaks within 10 days from their discovery. The Building Owner may undertake temporary repairs in an emergency to minimize damage to the building or contents. Such repairs should be executed by qualified personnel and won't affect any existing guarantees or warranties, provided they are reasonable, customary, and do not permanently damage the NanoTech roofing materials. Permanent repairs should be completed by an approved NanoTech contractor, under NanoTech's guidance for covered leaks, or as directed by the building owner for non-covered leaks.

Repairs shall be achieved using NanoTech Materials Rain Safe Leak Repair. Before and after digital photography shall be conducted in order to maintain the warranty.

Temporary Dry Surface Emergency Repairs

- Clean the damaged area using a pressure washer (1,200 to 1,500 psi)
- Rinse with clean water and allow the roof to fully dry.
- Apply NanoTech Materials Rain Safe Leak Repair and Premium Fabric. Contact NanoTech Technical Support Services before using any other product to confirm compatibility.

Specific Repairs for Liquid-Applied Coating Systems Not Over Spray Polyurethane Foam (SPF) Insulation

- Rectify minor mechanical damage to the liquid-applied coating membrane by employing NanoTech Materials Roof Sealant or Rain Safe Leak Repair, followed by applying the NanoTech Cool Roof Coat product as a top-coat. Ensure thorough removal of the damaged membrane before proceeding with repairs. In cases where the repaired area exceeds 2" (51 mm) in diameter, seek guidance from NanoTech Technical Support Services for appropriate repair procedures.

Roof Modifications

NanoTech Materials must be informed of any planned alterations to the roof before execution. The coverage provided by the guarantee or warranty may be jeopardized if:

- NanoTech is not notified of the alterations.
- The required work is not carried out by the original contractor of record (or another NanoTech-certified contractor).
- Non-NanoTech materials are utilized.
- All alterations, including but not limited to modifications involving roof-top HVAC units, other equipment, pipes, satellite dishes, antennas, conduit, general penetrations, skylights, etc., must be preapproved.

NOTE: These maintenance and inspection procedures are provided for reference purposes only. An approved NanoTech-certified contractor or professional roof consultant may offer a more detailed maintenance program. Maintain records of roof damage and maintenance inspections for each building roof.

7.0 Application Equipment

The following equipment has been rigorously tested with NanoTech's Cool Roof Coating system to ensure optimal application and performance. For best results, we recommend using these tools and systems, which have been evaluated for compatibility and efficiency with our advanced coating technology.

For Use in Application

Roof Coating Sprayers

To achieve consistent and efficient application of NanoTech's Cool Roof Coating, a gas or hydraulic sprayer with a minimum intake of 2.5 GPM and operating pressure of at least 2500 PSI is required, ensuring proper material flow and surface coverage.

- Graco Gas/Hydraulic Sprayers
  - GH Big Rig
  - King
  - DutyMax HD
  - GMAX II Roof Rig
  - DutyMax

Spray Tips

For optimal performance with NanoTech's Cool Roof Coating, we recommend using a spray tip designed for a wide fan pattern and equipped with a reversible feature to ensure consistent coverage and quick clog clearing during application..

- Graco RAC X Wide RAC SwitchTip, 1235

Support For Proper Application

- Nap rollers
- Tie offs
- Gloves
- Eye protection/hard hats
- Mil Gauges
- Cleaners
- Primers
- Fabrics
- Sealant
- Flashing
- Mastic
- Emulsions
- Pond fillers

8.0 Appendix

8.1 Cool Roof Coat Coverage Rates

NanoTech Materials Cool Roof Coat

NanoTech Cool Roof Coat redefines building heat-rejection by adding unusually low conductivity to high emissivity and reflectivity to keep rooftop heat out, even as soiling and latent heat transfer undermine conventional cool roof systems.

10 Year System Warranty	Dry Mils*	Gallons per 100ft²	Total Wet Mils* (Cool Roof Coat)	Number of Passes
Metal	23	2.0	32	1
Mod Bit	23	2.0	32	1
EPDM	23	2.0	32	1
PVC	23	2.0	32	1
TPO	23	2.0	32	1
SPF	23	2.0	32	1
Plywood/OSB	23	2.0	32	1
SPF Recoat	23	2.0	32	1
Structural Concrete	23	2.0	32	1
Coating Recoat	23	2.0	32	1
BUR	Contact your Regional Sales Manager			

Warranty Available	
Length	10 years
Type	NDL
Cost	$4/Square

15 Year System Warranty	Dry Mils*	Gallons per 100ft²	Total Wet Mils* (Cool Roof Coat)	Number of Passes
Metal	40	3.5	56	2
Mod Bit	40	3.5	56	2
EPDM	40	3.5	56	2
PVC	40	3.5	56	2
TPO	40	3.5	56	2
SPF	40	3.5	56	2
Plywood/OSB	40	3.5	56	2
SPF Recoat	40	3.5	56	2
Structural Concrete	40	3.5	56	2
Coating Recoat	40	3.5	56	2
BUR	Contact your Regional Sales Manager			

Warranty Available	
Length	15 years
Type	NDL
Cost	$6/Square

20 Year System Warranty	Dry Mils*	Gallons per 100ft²	Total Wet Mils* (Cool Roof Coat)	Number of Passes
Metal	46	4.0	64	2
Mod Bit	52	4.5	72	2
EPDM	52	4.5	72	2
PVC	52	4.5	72	2
TPO	52	4.5	72	2
SPF	52	4.5	72	2
Plywood/OSB	52	4.5	72	2
SPF Recoat	52	4.5	72	2
Structural Concrete	52	4.5	72	2
Coating Recoat	52	4.5	72	2
BUR	Contact your Regional Sales Manager			

Warranty Available	
Length	20 years
Type	NDL
Cost	$8/Square

*Approximate; rounded to the nearest whole mil. Maximum 40 wet mils (2.5 gallons per 100 ft²) per pass. 20-year: two passes of approximately 32 and 40 wet mils (metal: two passes of approximately 32 wet mils each).

Exact calculated values (71.8% volume solids; DFT = WFT × 0.718): 10-year 32.1 WFT / 23.0 DFT; 15-year 56.1 WFT / 40.3 DFT; 20-year 72.2 WFT / 51.8 DFT; 20-year metal 64.2 WFT / 46.1 DFT.

8.2 Ancillary System Coverage Rates

Product Name:	Purpose:	Coverage Rate:	Application:	Packaging:
NanoTech Cool Roof Base Coat	Protective Barrier	2–2.5 gallons per 100 square feet	Brushing, Rolling, or Spraying	5-Gal Bucket 55-Gal Drum
NanoTech TriSeam	Seals Penetrations and Seams	2 gallons per 132 linear feet @ 6” wide	Brushing, Rolling, or Spraying	5-Gal Buckets
NanoTech Rain Safe Leak Repair	Waterproofing Solution that cures under water	2 Coats of 20 wet mils over each capsheet	Brushing or Rolling	3.5-Gal Bucket
NanoTech Roof Cleaner	Enhances Roof Surface Preparation for Coating	300-500 square feet per gallon	Spraying	5-Gal Bucket
NanoTech Roof Sealant *Acrylic Systems*	Bridges Large Gaps	Vertical seams: 1/10 gallon per 100 square feet Horizontal seams: ¼ to ½ gal of caulk per 100 square feet	Brushing or Trowel	5-Gal Bucket
NanoTech Roof Sealant *Silicone Systems*	Protective Coat for variety of roof membranes	48 wet mils (3 gal per square)	Brushing	5-Gal Bucket *Offered in Black, Grey, or White*
NanoTech Rust Inhibiting Primer	Corrosion – Resistant base for Topcoats	120-160 square foot per gallon	Brushing, Rolling, or Spraying	5-Gal Bucket
NanoTech Skylight Sealer	Transparent Coating and Sealer	350–500 square ft per gallon *Depending on substrate	Brushing or Spraying	5-Gal Bucket
NanoTech Sub Slope Silicone	Protective, High Solid, Single Component Coating	14 dry mils /1 gallon per 100 square feet	Brushing, Rolling, or Spraying	5-Gal Bucket 55 Gall Drum *Offered in Black, Grey, or White*
NanoTech TPO Primer	Single – Ply Primer	300-400 square feet per gallon	Spraying preferred	5-Gal Bucket 55 Gall Drum

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NANOTECH MATERIALS

Our Mission

NanoTech Materials is the global name for **heat control in the built environment, logistics, and industrial sectors.**

Our environmentally adaptive materials play across the heat mitigation spectrum from extreme fire and refractory applications to passive solar radiation protection.



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