

Insulative Coat: Cool Touch

Application & Technical Manual

NSF[®]

 **NANOTECH**
M A T E R I A L S

INSULATIVE COAT

Cool Touch



CONTENTS

1.0 Safety Precautions	3
1.1 Product Description	3
2.0 Equipment Needed	3
2.1 Recommended Equipment for Application (Sprayer)	4
2.2 Cleaning and Usage	4
3.0 Manufacturer's Specifications	4
3.1 Cool Touch Maintenance	4
4.0 Universal Surface Preparation	5
4.1 Metal Substrate Preparation	5
4.2 Fiberglass Substrate Preparation	5
4.3 Product Preparation	6
5.0 Cleaning and Usage	6
6.0 Product Circulation Guidelines	7
7.0 Repairs	7
8.0 Adhesion Test	7
9.0 Substrate Preparation	8
10.0 Use of Primers	8
11.0 Coating Application	8
11.1 Wet Film Thickness	9
12.0 Additional Product Details	9
12.1 Qualification for Contractors	9
12.2 Testing and Labeling	9
12.3 Product Handling and Storage	9
12.4 Important Notes/Considerations	10
13.0 Appendix	11
13.1 Safety Data Sheet	11
13.2 Material Warranty	16

© 2025 by NanoTech Materials, Inc.

This material is copyrighted, and all rights are reserved by NanoTech Materials, Inc. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without the prior written permission of NanoTech Materials, Inc.

The names of software products referred to in this manual are claimed as trademarks of their respective companies. NanoTech is a registered trademark of NanoTech Materials, Inc.

Last Updated: March 2025

Insulative Coat: Cool Touch Application & Technical Manual

1.0 Safety Precautions

NanoTech Materials, Inc. has as a core value for the safety of all the lives that our company touches.

As a material science company, we have a relentless commitment to safety, from our R&D protocols through our day-to-day production operations, to our training materials for our end users. Safety for us, however, is not just physical. We strive for a culture of tolerance and respect across our operations. We are an inclusive and diverse team, where all talented individuals are welcome and respected.

The purpose of this manual is to ensure your safety and to provide installation instructions for proper adhesion and performance in accordance with manufacturer specifications. Installation of NanoTech Materials Inc. Insulative Coat Cool Touch requires the use of a texture or airless equipment that will allow the installer to apply the product at a larger scale. The use of rollers and brushes may be used for areas that are hard to reach or small (minor) areas. Scaling heights required to install the product on tanks, containers, or structures can be slippery. Adding a liquid coating will make surfaces more slippery and increase the chance of falling. Professional installation with harnesses and fall protection measures is highly recommended. The purchase and use of this product implies an understanding and acceptance of the risks of using high pressure equipment. Buyer agrees to hold NanoTech Materials, Inc. harmless and indemnify NanoTech Materials, Inc. against any and all accidents, damages, claims, or death, resulting from improper use or lack of safety considerations when using or installing our products. To ensure proper application and application longevity, Nanotech Materials Insulative Coat Cool Touch must be mixed and applied in accordance with the application instructions for successful adhesion and maximum insulation capability. The mixing process should take place at ground level on a flat even surface. NanoTech Materials, Inc. recommends placing a tarp, cardboard, plastic sheet, or other similar protective covering under the bucket to mitigate splashing and minimize the chance of product sticking to undesired surfaces.

Always install NanoTech Materials, Inc. Insulative Coat Cool Touch in accordance with OSHA (latest edition) standards.

For product-specific safety guidelines, refer to the Safety Data Sheet (SDS) in the Appendix.

1.1 Product Description

NanoTech Materials, Inc. Insulative Coat Cool Touch is a water based acrylic polymer coating system. As with other acrylics, the application is best performed above 40°F (4°C). Do not allow the product to freeze. Store in a cool dry place. Surface temperature of substrate should be between 40°F and 120°F for proper adhesion. In instances where NanoTech Insulative Coat Cool Touch is exposed to temperatures below 40°F (4°C) it is vitally important that all containers of the NanoTech Materials, Inc. Insulative Coat Cool Touch be thoroughly mixed to ensure proper adhesion and performance longevity.

2.0 Equipment Needed

Necessary equipment for proper installation of NanoTech Materials Insulative Coat Cool Touch may include, but is not limited to, the following:

- Gloves
- Eye protection
- Dust Mask
- Industrial scissors
- Chalk line
- Flat or serrated squeegee
- Utility knife
- Measuring tape
- Rags
- Writing/marketing instruments.
- T-square/straight edge
- Stir sticks.
- Rollers and brushes
- Protective sheeting
- Masking/painters tape
- Wire brush
- Trowels

2.1 Recommended Equipment for Application (Sprayer):

1. Graco Gas/Hydraulic Sprayer with 2.5 GPM minimum intake
2. Tested Models:
 - a. GH 300
 - b. GH 675
 - c. GTX 2500 or larger texturizer models
 - d. Graco STX Air Assist Spray Gun
 - e. Graco Tip, 0.031" or Larger
 - f. Graco Tip Guard, Part No. GR243161
OR
 - g. Paint roller/Paint brush.
3. Notched Wet Mil Gauge
4. Type II Electronic Dry Film Thickness Measurement Equipment

2.2 Cleaning and Usage

Clean the spraying machine immediately after use to avoid the resin from curing 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.

3.0 Manufacturer's Specifications

The NanoTech Materials, Inc. Insulative Coat Cool Touch is a high-performance, elastic, polymeric coating formulated with Nanotech's patented additive used to provide high emissivity values as well as its low thermal conductivity constant. The coating is an insulator designed for optimal performance in areas with persistent condensation which have passed ISO 6270-1:2017 and exhibited no blisters, peeling or delamination. The coating has successfully passed NACE TM21423, and can be applied to high-temperature assets, effectively reducing their surface temperature to a cool, ambient touch. With the dual properties acting as a high temperature thermal barrier, this product is highly efficient. The product reduces condensation to the substrate's surface. In addition the coating does not promote corrosion under insulation (CUI) when applied over an approved primer. Thoroughly review The Safety Data Sheet (SDS) in the Appendix to review the following important information:

- Safety information for personnel and the environment
- First aid measures
- Chemical composition and classification
- Material handling and storage
- Regulatory and legal information

NanoTech Materials, Inc. Insulative Coat Cool Touch is resistant to humidity and does not promote CUI as tested per the standards outlined below:

1. NACE TM21423 – Test method for determination of substrate and surface temperature limits for insulative coatings used for personnel protection.
2. ISO 9227:2017 - Corrosion tests in artificial atmospheres — Salt spray
3. ISO 6270-1:2017 – Paints and varnishes — Determination of resistance to humidity
Part 1: Condensation (single-sided exposure)
4. ISO 12944-5:2019 – Paints and varnishes — Corrosion protection of steel structures by protective paint systems.
5. ASTM E1269 – Standard Test Method for Determining Specific Heat Capacity by Differential Scanning Calorimetry.

3.1 Cool Touch Maintenance

The effectiveness of this coating is due to its combination of high emissivity and low thermal conductivity. Emissivity, a surface phenomenon, is most effective when the coating is directly exposed to the heat flux source. Because of its high emissivity, the coating does not retain heat but instead reflects it back to the source. Additionally, the coating's low thermal conductivity, a key aspect of its insulating chemistry, creates a gradient that significantly reduces heat transfer. NanoTech recommends yearly inspections to check for:

1. Wear, Abrasion, or Tears

This can be caused by repeated and/or extensive abrasion of hard materials striking against the coating. An example is a tool or construction object falling from higher elevations hitting the coating. Lifting equipment or material handling may cause damage to the coating if work is being conducted in the area, and the equipment or cargo, brush or strike, against the coating.

Insulative Coat: Cool Touch Application & Technical Manual

2. Water swelling

The product is water resistant, however prolonged water submersion (more than 48 hours) can cause water swelling and damage the product. They may occur during a flood event.

3. Damage

If the product is damaged, immediately remove the loose coating and inspect if the area for dirt contamination or any foreign matter. If dirt is present, the coating can be cleaned with a soap and water mixture (soapy water) and soft brush or a power washer. Solvents shall NOT be used to clean the surface of the coating. Please make sure the tip of the power washer is at least 18 inches away from the coating with a wide opening for the tip. Test in a small area first to ensure the coating will not be stripped by a designated water pressure. For stubborn substances or organic growth use a 5:1 water-to-bleach mix to clean the product.

Once achieved, use a brush to apply the NanoTech Materials, Inc. Insulative Coat Cool Touch coating to the damaged area, gradually building up the thickness to blend with the surrounding surface. Allow the product to cure as specified in the installation instructions.

4.0 Universal Substrate Preparation

For non-ferrous substrates, the use of a primer is not needed. To ensure proper adhesion to the non-ferrous substrate, the surface of the non-ferrous metal needs to have a matte or dull finish. Sand the surface with a fine to medium sandpaper prior to applying the Cool Touch insulative coating. The surface should be sufficiently sanded when all glossy appearance is gone. Remove all loose material from the surface.

Wash substrate with clean water or denatured alcohol. All surfaces should be clean, dry, and free of debris, dirt, grime, etc. Do not use solvents, degreasers, or any other chemical prior to application. If these chemicals are to be used, you must ensure a final wash with clean water has been performed and the substrate is dry and entirely free of any residue.

4.1 Metal Substrate Preparation

Follow the surface preparation as outlined by the primer manufacturer for metal substrates. Ensure that the NanoTech Materials Insulative Coat Cool Touch is applied within the recoat window of the primer manufacturer.

Standard Application Substrate Temperature 40F up to 120F

1. Ensure that an approved corrosion inhibitive primer has been applied in accordance with manufacturers' recommendations.
2. Apply 55 mils (WFT) of the NanoTech Materials Insulative Coat Cool Touch coating to the surface and allow it to completely dry. This will achieve cool touch conditions for temperatures up to 275F.
3. Allow approximately 1.5 to 10 hours to completely dry prior to applying the subsequent coat of Cool Touch. Temperature and humidity will affect the recoat window. Refer to the product data sheet for recoat/curing schedules.
4. Once the coating is completely dry, proceed with another 55 mils of the NanoTech Materials Insulative Coat Cool Touch coating to the surface. This will achieve cool touch conditions for temperatures up to 350F.

High Application Substrate Temperature 120F up to 200F (Applied on Operating Equipment)

NanoTech Materials Insulative Coat Cool Touch can be applied on actively operational equipment up to 200F, allowing for ease of application without disrupting operations.

1. Apply a 10-mil tack (mist) coat of the NanoTech Materials Insulative Coat Cool Touch coating to the surface and allow it to completely dry. Observing steam or vapor emanating from the metal surface is completely normal and is expected.
2. Apply a 10-mil tack (mist) coat of the NanoTech Materials Insulative Coat Cool Touch coating to the surface and allow it to completely dry. Observing steam or vapor emanating from the metal surface is completely normal and is expected.
3. Allow approximately 30 minutes to 1 hour for the tack coat to completely dry prior to applying the subsequent coat of Cool Touch.
4. Once the coating is completely dry, proceed with another 55 (WFT) mils until desired thickness is achieved.

4.2 Fiberglass Substrate Preparation

Wash with water, wipe, and clear or remove any dirt, debris, dust, grime, or foreign substances from the substrate. Follow substrate manufacturer's specifications for cleaning the substrate prior to applying the NanoTech Materials, Inc. Insulative Coat Cool Touch product. Any cleaning agents that are used to clean the substrate must be removed prior to applying the NanoTech Materials Insulative Coat Cool Touch product. Any and all substrate repairs or imperfections that might compromise the substrate or coating must be remediated before applying NanoTech Materials Insulative Coat Cool Touch. Pressure wash if possible and allow to dry thoroughly before applying the coating membrane. Nanotech Materials recommends taping off any adjacent areas to prevent

applying to areas you wish to keep clear. A primer is generally unnecessary with the NanoTech Materials Insulative Coat Cool Touch, however in instances where the surface is extremely resistant to adhesion, a standard coating primer or light abrasion might be necessary to ensure a mechanical bond. Surface should be clean and thoroughly dry prior to application.

4.3 Product Preparation

NanoTech Materials Insulative Coat Cool Touch requires approximately three (3) to ten (10) minutes of even mixing prior to application. The time required for proper mixing depends on temperature. The insulative coating is fully mixed when the mixture appears smooth and free of clumps in the bucket. This is advisable to ensure a consistent finish and prevent sedimentation that might clog sprayers. NanoTech Materials Insulative Coat Cool Touch recommends the use of a portable impact drill and ribbon mixer paddle. The NanoTech Materials Insulative Coat Cool Touch is ready for application when no visible chunks or clumps are present in the mix and the product has a smooth, thick, paint-like consistency. Remember to place containers on top of a sacrificial surface (plastic sheet, tarp, cardboard, etc.) to prevent spillage onto the floor or ground.

Application (Cool Touch):

1. Apply the first coat of the NanoTech Materials Insulative Coat Cool Touch evenly and allow to dry. Recommended wait time between coats is 45-75 minutes at 77F @50% relative humidity. High humidity conditions and low temperatures will lengthen the wait time.
2. NanoTech recommends using a notched or wet mil gauge in accordance with ASTM D4414 "Standard Practice for Measurement of Wet Film Thickness by Notch Gages" which can be found at most paint stores to ensure proper coating thickness.
3. For substrate temperatures up to 275F, apply a single coat at a wet film thickness (WFT) of 55 mils thick which will have a dry film thickness (DFT) of 40 mils.
4. For substrate temperatures from 276F up to 350F, apply two coats at WFT of 55 mils thick. Once this cures, the total dry film thickness measured with a DFT gauge should be approximately 80 mils thick.
5. In hot and/or windy conditions NanoTech Materials Insulative Coat Cool Touch may dry/cure faster than expected.
6. Do not allow product to get wet, dirty, or be disturbed during initial cure.
7. Apply additional coats as needed to achieve desired finish. Adding more product will increase the performance results. When it comes to the NanoTech Materials Insulative Coat Cool Touch, the thicker the coating, the greater the performance.
8. Be sure to remove the tape prior to full cure. This will ensure a clean line is left on the substrate and prevent peeling of the coating.
9. If tape is not removed before a full cure, we recommend gently running a dull knife along the seam of the tape and pulling carefully to ensure a clean break between the tape and the product.
10. If product starts to lift with the tape, carefully remove the lifted product and reapply the coating to the area for coverage.

Best Practices:

While standing in the middle of your coating project, start applying product to the edges first and work your way back to the middle of the structure. In this way you can prevent backing yourself into a corner or walking backwards off a scaffold or ladder. You'll want to apply product to the furthest location from your ladder and work back to that ladder. The last piece coated should be applied while standing off of the structure.

If using a sprayer to apply product, you'll want at least a 31/1000th spray tip (i.e. 331, 431, 531, 631, etc.). See recommended equipment on page 1. Taping procedures will be the same as if you were hand applying the coating. NanoTech recommends draping sheet plastic or tarps over adjacent surfaces or surroundings to avoid overspray during application.

Cure Time/Recoat Schedule:

The NanoTech Materials Insulative Coat Cool Touch should be fully cured in 48 hours based on 55 (WFT) at 77F @ 50% relative humidity for a single coat. After the first coat is applied, it is recommended to wait at least 5 hours at 77F @ 50% relative humidity prior to the second coat of NanoTech Materials Insulative Coat Cool Touch.

5.0 Cleaning and Usage

Clean the sprayer immediately with water after use to avoid curing the resin inside the pump and the hose. Follow the manufacturer's standards on cleaning procedures. Please remove all filters from the spray gun and sprayer. This is very important step during for the proper application of insulative coating.

Use and service the spraying machine following the manufacturer's recommendations.

Minimal environmental considerations are required for clean-up as the NanoTech Materials Insulative Coat Cool Touch is an low VOC

Insulative Coat: Cool Touch Application & Technical Manual

product. NanoTech recommends placing waste into original containers to be disposed of in accordance with local waste disposal guidelines. Nontoxic, biodegradable cleaning products should be used to clean areas of overspray. Scrub with a sponge or scrape from glass with a plastic scraper. Acrylic cleaners, solvents, and mineral spirits can be used in situations where they will not harm the environment. When in doubt, use a strong abrasive dish sponge and water to remove the product.

ALWAYS DISPOSE OF CHEMICAL WASTES IN ACCORDANCE WITH YOUR LOCAL WASTE DISPOSAL ORDINANCE.

Maintenance:

All coatings require routine maintenance to ensure proper performance and longevity. Any deficiencies, cracks, voids, or minor damage from such situations can be quickly remediated by adding a small amount of coating to that area and allowing the product to cure in accordance with the installation instructions. The NanoTech Materials Insulative Coat Cool Touch can be kept clean by using soapy water followed by light to medium scrubbing a sponge.

6.0 Product Circulation Guidelines

This is a high-solids, acrylic emulsion formulation. 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.

To prepare the product:

- Agitate the product using a ribbon style paddle and a mixer with high rpm capability, for at least 5 minutes.
- Repeat the mixing process for product that has been left standing for more than 45 minutes.
- Product is thoroughly mixed and ready for application when it takes on a heavy paint-like consistency.

Product that is sealed in new packaging has a shelf-life of 12 months from date of manufacture. Product that has been opened and resealed has an approximate shelf-life of 30 days or less depending on how long opened containers have been exposed to open air. Inspect and remove any cured resin or solids from a used bucket, if any, before using leftover product and follow agitation guidelines.

7.0 Repairs

NanoTech Materials does not provide design services. When replacing defective substrate material, it is recommended to consult an engineering professional. For warranty purposes only, NanoTech Materials must review all associated work, including substrate repairs or modifications, for acceptance under the terms of the materials warranty.

8.0 Adhesion Test

It is extremely important that NanoTech Materials Insulative Coat Cool Touch adhere well to the substrate.

An adhesion test is required prior to application of our NanoTech Materials Insulative Coat Cool Touch. To perform an adhesion test on the existing primer to ensure that the primer is in sound condition on the substrate, utilize the adhesion test in accordance with ASTM D3359 Method A "Standard Test Methods for Rating Adhesion by Tape Test" having a 3A adhesion rating or higher.

Option 1:

Once the existing primer is determined to be well adhered using the adhesion test performed above, our NanoTech Materials Insulative Coat Cool Touch can then be applied at the thickness recommended by a Nanotech Materials representative to ensure proper insulation. An adhesion test of the NanoTech Cool Touch Insulator Coating may also be performed in accordance with ASTM D4541 "Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers". There are two types of adhesive failure, and a passing test will depend on which type of failure you experience:

1. Adhesive Failure – The insulator coating is attached to the dolly and will completely delaminate from the primer entirely.
 - a. Record the pounds per square inch (psi) from the portable adhesion equipment.
 - b. An adhesion test is considered a failed test if the test results produce adhesive failure at a rate of less than 20 psi.
2. Cohesive Failure – The insulator coating is still attached to the dolly and also still attached to the substrate. The insulator coating has split within itself.
 - a. Record the pounds per square inch (psi) off the portable adhesion equipment.
 - b. The result of a cohesive failure is an automatic pass.

Option 2:

Important note: Each recommended complimentary system may have a specific adhesion test method as per each manufacturer's specification. The adhesion test method outlined below is written specifically for NanoTech Materials Insulative Coat Cool Touch as a stand-alone product or with a primer and no other materials in accordance with ASTM D 903. This standard requires the installer to perform one adhesion test or any time the substrate changes and is performed as follows:

1. A minimum of two samples is required.
2. Clean two areas of at least 12 inches by 12 inches.
3. Clean one area and allow it to dry.
4. Clean a second area, allow it to dry, prime the area, and let it cure per manufacturer's specification.
5. Coat the primed and unprimed areas with 20 mils of coating in swaths that are 4" wide and 7" long.
6. While the coating is still wet, embed 2"x 12" polyester fabric across a test patch such that there is a 1" border around the embedded section. Leave a 6-inch-long dry section outside of the test patch. There should be a 6"x2" piece of fabric embedded and a 6"x2" piece of fabric exposed.
7. Apply a second coat of product to each test sample to totally encapsulate flashing fabric and let it cure for at least 48 hours at 77F @ 50%RH. If ambient conditions are outside of these parameters, curing times will be extended.
8. Tie a knot in the loose end of the fabric and secure to your calibrated fish scale.
9. Pull the dry end of the flashing fabric at a 90-degree angle with calibrated scale to failure of adhesion and record your results.

There are two types of adhesive failure, and a passing test will depend on which type of failure you experience:

An adhesion test is considered a failed test if the test results produce adhesive failure at a rate of less than 2 lb. per linear inch.

9.0 Substrate Preparation

Prior to applying the NanoTech Materials Insulative Coat Cool Touch:

1. Mask off areas with tape and protective film that are not intended to receive a coating.
2. Surface Cleaning:
 - a. Before cleaning a substrate, verify the local water runoff ordinances and restrictions.
 - b. Hand-remove any debris or other large foreign objects. Remove heavy deposits of dirt, and other debris using a broom or air blower. Use a stiff broom to agitate dirty surfaces.
3. Carefully power-rinse the substrate with clean water using a minimum 2,000 psi (13,790 kPa) low pressure water cleaning.
 - a. Maintain 18" separation between the sprayer tip and the substrate when pressure washing substrate to prevent damage.
 - b. Remove grease, oils, or contaminants which may interfere with adhesion using warm water and mild detergent. Treat areas of algae, mildew, or fungus with a 5:1 solution of household water and bleach. Rinse the substrate to ensure removal of all detergents or anything else that could reduce adhesion.
4. Allow surfaces to dry thoroughly before applying the coating.

10.0 Use of Primers

For ferrous metal surfaces, apply a commercial-grade, rust-inhibitive primer from the NanoTech Materials Cool Touch list of approved compatible ancillary products, and in accordance with the primer manufacturer's recommendations. Then perform a pull test for adhesion compatibility as described above in the Adhesion Test section.

11.0 Coating Application

The overall weather conditions, surface temperature, surface moisture, ambient temperature, relative humidity, and wind velocity affect the curing time of this product.

This product is cured by water evaporation only. The application requires a minimum temperature of 41°F and rising. Do not apply at temperatures greater than 200°F. Do not apply if the dew point is within 5°F degrees of the surface temperature.

Under no condition is the application of this product to be exposed to rain or freezing temperatures for a period of no less than 8 hours.

Insulative Coat: Cool Touch Application & Technical Manual

11.1 Wet Film Thickness

Apply the product in layers at a wet film thickness (WFT) of 55 mils thick which is approximately 1MM. The 55 mils WFT will cure to a total of 40 mils dry. There is an approximate 15-20% shrinkage rate from wet to dry film thickness deposition. Utilizing a notched or wet film thickness gauge for proper thickness is necessary to ensure deposition thickness is consistent.

Ensure that each applied layer is dry before applying subsequent layers. Once the final layer has been applied and left to dry, verify the final thickness has been achieved by using a dry film thickness gauge with current calibration records by the manufacturer.

11.2 Custom Higher Temperature Thermal Efficiency

Application (Thermal Insulative Performance):

1. Apply the first coat of the NanoTech Materials Insulative Coat Cool Touch evenly and allow to dry. Recommended wait time between coats is 45-75 minutes at 77F @50% relative humidity. High humidity and low temperature conditions will lengthen the wait time.
2. A notched or wet mil gauge in accordance with ASTM D4414 "Standard Practice for Measurement of Wet Film Thickness by Notch Gages" which can be found at most paint stores can be used during installation to ensure proper coating thickness.
3. Apply each coat at a wet film thickness (WFT) of 55 mils thick which is approximately 1MM. You can apply up to 120 mils wet in a single coat, however, this will increase drying times of the product .
4. In hot and/or windy conditions NanoTech Materials Insulative Coat Cool Touch may dry/cure faster than expected.
5. Do not allow product to get wet, dirty, or be disturbed during initial cure.
6. Apply additional coats as needed to achieve desired finish. Adding more products will increase the performance results. When it comes to the NanoTech Cool Touch Insulator Coat, the thicker the coating, the greater the performance.
7. Be sure to remove the tape prior to full cure. This will ensure a clean line is left on the substrate and prevent peeling of the coating.
8. If tape is not removed before a full cure, we recommend gently running a dull knife along the seam of the tape and pulling carefully to ensure a clean break between the tape and the product.
9. If product starts to lift with the tape, carefully remove the lifted product and reapply the coating to the area for coverage.

11.3 Top Coating

Prior to top coating NanoTech Materials Insulative Coat Cool Touch, check with a NanoTech Materials representative for approved topcoats.

Ensure that the NanoTech Materials Insulative Coat Cool Touch is fully cured prior to applying an approved topcoat.

12.0 Additional Product Details

12.1 Qualification for Contractors

The Contractor shall be applicators trained by NanoTech Materials, Inc or a NanoTech Representative be on site for supervision. For questions pertaining to our qualification process, contact a NanoTech Representative.

12.2 Testing and Labeling

The NanoTech Materials Insulative Coat Cool Touch is produced in NanoTech facilities using a stringent ISO9001:2015 quality control framework. 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.

12.3 Product Handling and Storage

For safe handling of this product read the SDS and TDS of the NanoTech Materials Insulative Coat Cool Touch and follow these guidelines:

- Avoid contacting and 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, 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: 41-100°F.
- Keep only in the original container.
- Protect against the elements.

12.4 Important Notes/Considerations

1. Nanotech Materials, Inc. offers a 1-year warranty pertaining to product defects on projects installed by professional applicators.
2. Working with liquid coatings from heights is a dangerous activity. NanoTech Materials, Inc. requires using a certified applicator for installation.
3. The successful application of the NanoTech Materials Insulative Coat Cool Touch is heavily dependent on the current condition of the existing substrate and quality of the application process and installers. To ensure the best results, please consult a qualified coating professional to confirm your substrate is structurally fit for application of the NanoTech Materials Insulative Coat Cool Touch.

13.0 Appendix

13.1 Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	NanoTech Materials Insulative Coat: Cool Touch
Product Use Description:	Acrylic Thermal Barrier Coating
Chemical Family:	Acrylic Elastomer
Manufacturer:	NanoTech Materials, Inc. 21401 Park Row Drive #360 Katy, TX 77449
Email:	info@nanotechmaterials.com
Telephone:	1-(888) 296-6266

2. HAZARDS IDENTIFICATION

GHS Classification

Skin Sensitizer :	Category 1
-------------------	------------

GHS Label Elements

Hazard Pictograms:	
--------------------	---

Signal Word:	Warning
--------------	---------

Hazard Statements:	May cause allergic skin reaction. Eye & skin irritant.
--------------------	--

Precautionary Statements

Prevention:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves, eye protection. P308+P313 - If exposed or concerned: Get medical advice/attention P405 - Store locked up.
Disposal:	P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture:	Acrylic emulsion mixture
Substance Name:	NanoTech Materials Insulative Coat: Cool Touch

CAS number	Components	% by Mass
Not classified	Non-reportable components	70-99%
Not classified	Thickener	0.1 to 1%

Not classified	Defoamer	0.1 to 0.5%
Not classified	Dispersant	0.1 to 0.5%
Chloromethyl isothiazolinone	55965-84-9	0.0005 – 0.001%

4. FIRST-AID MEASURES

Description of first aid measures

First-aid measures general:	Seek medical attention immediately. If you feel unwell after in contact with this product. When seeking medical advice show the medical practitioner the product label if possible. If exposed or concerned: Obtain medical advice/attention immediately.
First-aid measures after inhalation:	Remove person to fresh air and keep comfortable for breathing. Ensure fresh air breathing.
First-aid measures after skin contact:	Wash with water and soap. Rinse with water. Wash skin with plenty of running water.
First-aid measures after eye contact:	Obtain medical attention if pain, excessive blinking, or redness persists. Direct contact with the eyes is likely to be irritating. Rinse eyes with water as a precaution.
First-aid measures after ingestion:	Drink plenty of water. Get medical advice/attention. Call a poison center or a doctor if you feel unwell.

Most important symptoms and effects (both acute and delayed)

Symptoms/injuries:	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after skin contact:	May cause moderate irritation.
Symptoms/injuries after eye contact:	Irritation of the eye tissue.
Symptoms/injuries after ingestion:	No data available.
Chronic symptoms:	No effects known.

5. FIRE-FIGHTING MEASURES

Product not combustible

Extinguishing Media

Suitable Extinguishing Media:	Carbon dioxide, dry chemical, foam, water spray, fog.
--------------------------------------	---

Explosion Hazard:	Vapors are heavier than air and may travel along the ground to an ignition source some distance from material handling point. Ignition sources include pilot lights, smoking, heaters, electric motors, sparks from electrical switches, and static discharges.
--------------------------	---

CAUTION:	Never use cutting torch on empty containers. Residual solvent vapor in empty containers may ignite or explode. Any application to hot surfaces requires special precautions. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
-----------------	---

Hazardous Combustion Products:	Carbon oxides (CO, CO ₂). Oxides of aluminum. Oxides of titanium.
---------------------------------------	---

Reference to Other Sections:	Refer to section 9 for flammability properties.
-------------------------------------	---

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Handle in accordance with good industrial hygiene and safety practice. For Non-Emergency Personnel: Evacuate and isolate the area and prevent access. Remove ignition sources. No flames, smoking or flares in hazard area. Notify management. Avoid breathing vapor or mist and put on protective equipment. Control source of the leak. For Emergency Personnel: See Section 8 for any specialized clothing recommendations.
---	---

Insulative Coat: Cool Touch Application & Technical Manual

Methods and material for containment and cleaning up:	For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Absorb and/or contain spill with inert material. Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely.
Environmental Precautions:	Prevent entry to sewers and public waters.
Methods for Containment:	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Absorb and/or contain spill with inert material.
Methods for Clean Up:	Clear up spills immediately and dispose of waste safely.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Harmful or irritating material. Avoid contacting and 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.
Conditions for Safe Storage:	Store in a cool dry place. Keep container(s) closed.
Materials to Avoid:	Oxidizing agents.
Maximum Handling Temperature:	Not determined.
Conditions for Safe Storage, Including Any Incompatibilities:	Technical measures: Comply with applicable regulations. Storage conditions: Keep container closed when not in use. Store locked up. Store in a well-ventilated place. Keep cool. Incompatible products: Strong bases. Strong acids. Strong oxidizers
Storage Temperature:	4 - 38 °C
Storage Area:	Keep only in the original container. Protect against frost.
Special Rules on Packaging:	Meet all legal requirements.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:	Not applicable
Engineering Measures:	Good ventilation & appropriate PPE
Personal Protection	
Appropriate engineering controls:	Ensure good ventilation of the workstation
Recommended clothing - Skin Protection:	Gloves, long-sleeved shirt, and boots to prevent contact
Breath protection:	Ventilation and dust mask are recommended when applying
Hand protection:	Nitrile gloves are recommended
Eye Protection - Face:	Recommended wearing glasses
Respiratory protection:	In case of insufficient ventilation, wear suitable respiratory equipment
Environmental exposure controls:	Avoid release to the environment
Other protective equipment:	Not required
Thermal Dangers:	Not applicable
Other information:	Do not eat, drink, or smoke during use

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Light beige
Appearance:	Emulsion
Aspect:	White or slightly beige
Odor:	Acrylic and/or faint ammonia
PH:	Not applicable
Fusion point:	Not applicable
Freezing point:	0°C
Initial boiling point:	100°C
Evaporation Rate:	<1
Flash point:	Not applicable
Flammability:	Nonflammable
Lower / Upper Flammability and Explosive Limits:	Not applicable
Vapor pressure:	No data available
Vapor density:	(Air = 1) 3 to 4
Relative density:	(Between 0.65 and 0.70 g/cm ³ density) a 15°C
Non-volatile solids:	> 60%
Solubility in water:	Miscible with water
Auto-ignition temperature:	Not applicable
Decomposition Temperature:	> 150°C
Viscosity:	40,000 – 50,000 cP

10. STABILITY AND REACTIVITY

Reactivity:	Reacts at ambient temperatures and above 100°C.
Chemical Stability:	Stable at room temperature.
Possibility of Hazardous Reactions:	Not applicable.
Conditions to Avoid:	Direct incidence of heat upon storage. Provide minimal natural ventilation of the environment.
Incompatible Materials:	Not applicable.
Unconcentrated acids and bases, dilute acid atmosphere:	Not applicable.
Hazardous Decompositions Products:	Not applicable.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Not applicable
Skin corrosion / irritation:	Skin contact may cause mild irritation
Serious eye damage / eye irritation:	Does not cause serious eye damage. Direct contact with eyes may cause irritation.
Respiratory or skin sensitization:	Not applicable

Insulative Coat: Cool Touch Application & Technical Manual

Germ cell mutagenicity:	Not applicable
Carcinogenicity:	Not applicable
Reproductive toxicity:	Not applicable
Specific target organ toxicity - single exposure:	Not applicable
Specific target organ toxicity - repeated exposure:	Not applicable
Aspiration hazard:	No inhalation hazards

12. ECOLOGICAL INFORMATION

ECOLOGY – GENERAL:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
ECOLOGY – WATER:	Very toxic to aquatic life with long lasting effects.
Eco toxicity:	Not applicable
Persistence and degradability:	Not applicable
Bio accumulative potential:	Not applicable
Soil Mobility:	Not applicable
Other adverse effects:	Not applicable

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste Disposal Recommendations:	Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to avoid release to the environment. Do not discharge into drains or the environment. Do not discharge into the sewer.
Ecology – Waste Materials:	Avoid release to the environment.
Recommended Methods for Final Destination:	Residues of this material do not constitute a hazard. It must be disposed of in an appropriate place. It should not be incinerated in sealed packaging.

14. TRANSPORT INFORMATION

Land:	It does not require specific regulation. It can be transported as a common cargo.
Hydro Ways:	It does not require specific regulation. It can be transported as a common cargo.
Air:	It does not require specific regulation.

15. REGULATORY INFORMATION

Specific health and environmental safety regulations for the chemical:	Not applicable.
---	-----------------

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Important information, but not specifically described in previous sections:	Not applicable.
References:	Not applicable.
Further Information:	Note on the Chemical Weapons convention (CWC) Toxic Chemicals and Precursors List None in this product

13.2 Material Warranty

NANOTECH MATERIALS, INC MATERIAL WARRANTY

INSULATIVE COAT: COOL TOUCH

Warranty No: _____ Application No: _____ Effective Date: _____ Term: _____

Owner: _____ Applicator: _____

Company Name and Location: _____

Total Square Feet: _____ Primer Applied? _____ Final DFT: _____ Top Coat Applied? _____

GUARANTEE & EXCLUSIVE REMEDY

NanoTech Materials Inc., a Texas Corporation with its principal offices in Katy, TX, (hereinafter called "NanoTech") warrants to the Asset Owner named above, that, subject to the provisions, conditions, exclusions, and limitations of this Warranty, the NanoTech coating Insulative Coat: Cool Touch ("Product") will be free from defects in materials and workmanship from the effective date shown above, for a period of ten (10) years from the date of application. During the term of this warranty, NanoTech will, at its expense, provide sufficient coatings materials to repair any defects (constituting cracking, peeling, or adhesion) in the coating membrane installed on the structure named above, resulting from ordinary wear and tear or natural deterioration by the elements, subject to the following terms and conditions:

Responsibilities of Owner:

Notification of Leaks:

1. In the event of a defect, Owner will notify NanoTech in writing within ten (10) days of the discovery of the defect. Either by email at warranties@nanotechmaterials.com, or postal mail to NanoTech Materials 21401 Park Row Blvd Suite #360 Katy, TX 77449, or NanoTech will have no responsibility for making repairs. NOTE: The industrial contractor is NOT an agent of NanoTech; notice to the industrial contractor is NOT notice to NanoTech. If after inspecting the substrate, NanoTech determines that the cause of the defect is within the terms of this limited warranty, NanoTech will then arrange for repairs.
 - a. By notifying NanoTech, you authorize NanoTech to investigate the cause of the defect. If the investigation reveals that the defect is not covered by this guarantee, no payment shall be made.
 - b. During the term of this Warranty, NanoTech, its agents, employees, and representatives will be given reasonable access to the site during regular business hours.

Preventative Maintenance and Repairs:

You must perform regular inspections and maintenance and keep records of this work.

1. To keep this guarantee in effect, you must repair any conditions to this substrate which are not covered by this guarantee, but that NanoTech concludes may be threatening the integrity of the NanoTech coating system. Any such repairs must be performed by a NanoTech certified industrial contractor. Failure to make timely repairs may jeopardize guarantee coverage.
2. You may make temporary repairs to minimize damage to the substrate or its contents in an emergency, at your sole expense. These repairs will not result in cancellation of the guarantee as long as they are reasonable and customary and do not result in permanent damage to the NanoTech coating system.
3. Any equipment or material that impedes any inspection or repair must be removed at your expense so that a NanoTech certified contractor can perform inspections or repairs.

Conditions:

NanoTech Materials makes this undertaking subject to the following conditions:

1. The Owner's only recourse to NanoTech is this Warranty. There are no other warranties of any kind, including, without limitation, warranties of merchantability or fitness for a particular purpose. This warranty is in lieu of the implied warranty of merchantability and all other warranties expressed or implied.
2. NanoTech's exclusive responsibility and liability under this warranty is to supply coating materials for repairs that may be necessary to maintain the coating membrane in a defect free condition subject to all the conditions, exclusions, and limitations of this document. The Owner recognizes and agrees that NanoTech shall have no liability for incidental, consequential, or other damages of any nature whatsoever, including, without limitation, loss of operational time or profits or any inconvenience, including damage of any kind to the substrate or its contents, any alleged breach of this contract of warranty, negligence, breach of warranty, strict liability or any other theory, other than the limited and exclusive liability set forth in Warranty.

Exclusions from Coverage:

(e.g., Items that are not "ordinary wear and tear" or are beyond the control of NanoTech)

This guarantee does NOT cover conditions other than defects defined as peeling, cracking, or delamination. This guarantee also does NOT cover defects caused by any of the following by way of illustration and example and not limitation, the following types of damage and repairs to the coating membrane, which is the subject of this warranty, are excluded from coverage:

1. Inadequate substrate maintenance, that is, the failure to follow the Scheduled Maintenance Checklists provided with this warranty (extra copies available by calling NanoTech at (888) 296-NANO) or the failure to repair owner responsibility items.

Insulative Coat: Cool Touch Application & Technical Manual

- 2. Natural disasters, including, but not limited to, floods, lightning, hurricanes, hail, windstorms, earthquakes, tornadoes, volcanic activity, or other Force Majeure phenomena.
- 3. Labor or installation costs
- 4. Equipment rental or downtime
- 5. Damage from improper storage, handling, mixing, or application
- 6. Misuse, mechanical abrasion, physical abuse, or exposure to chemicals outside listed tolerances
- 7. Substrate failure (e.g., rusted, section loss or delaminating surfaces)
- 8. Penetration, vandalism, damage, or attack by third parties, foreign objects, or agents including animal and plant life.
- 9. Discoloration or change in visual appearance due to

accumulation or streaking of airborne materials deposited on the surface from the atmosphere.

10. Misuse or abuse of the coating membrane.

Responsibilities of Applicator:

- 1. Applicator certifies that they are a NanoTech Certified Applicator and has installed the components covered by this Warranty in accordance with NanoTech's specifications.
- 2. Applicator agrees to bear the full burden of this warranty for a period of (1) year from the effective date listed above, the date of acceptance of the job by the Owner, or the date of the completion of all work on the job, whichever is later. Applicator further agrees to bear the full labor burden of this warranty for a period of ten (10) years from that same date.

No representative, employee, or agent of NanoTech, or any other person, has the authority to assume any additional or other liability or responsibility for NanoTech, unless it is in writing and signed by an authorized NanoTech Field Services Manager or Director. NanoTech does not practice engineering or architecture. Neither the issuance of this guarantee, nor any review of the substrate including the coating system (or the plans for the substrate), by NanoTech shall constitute any warranty of such plans, specifications or construction, or the suitability or code compliance of the coating system for any particular structure. NOTE: Any inspections made by NanoTech are limited to a surface inspection only, are for the sole benefit of NanoTech, and do not constitute a waiver or extension of any of the terms and conditions of this guarantee. This guarantee MAY BE SUSPENDED OR CANCELLED IF THE SUBSTRATE IS DAMAGED BY any cause listed above as AN EXCLUSION FROM COVERAGE that may affect the integrity of the substrate.

TRANSFERABILITY

You may transfer or assign this guarantee to a subsequent owner of this asset term only if: 1) the request is in writing to NanoTech at the address listed below within 60 days after ownership transfer; 2) you make any repairs to the coating system or other asset components that are identified by NanoTech after an inspection as necessary to preserve the integrity of the coating system; and 3) you pay an assignment fee of \$500. This guarantee is NOT otherwise transferable or assignable by contract or operation of law, either directly or indirectly.

LIMITATION OF DAMAGES; MEDIATION; JURISDICTION; CHOICE OF LAW

THIS GUARANTEE IS EXPRESSLY IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, and of any other obligations or liability of NanoTech, whether any claim against it is based upon negligence, breach of warranty, or any other theory. In NO event shall NanoTech be liable for any CONSEQUENTIAL OR INCIDENTAL DAMAGES of any kind, including, but not limited to, interior or exterior damages to the substrate. The parties agree that, as a condition precedent to litigation, any controversy or claim relating to this guarantee shall be first submitted to mediation before a mutually acceptable mediator unless NanoTech at its sole option, elects to waive said requirement. In the event that mediation is unsuccessful, or is waived by NanoTech, the parties agree that neither one will commence or prosecute any lawsuit or proceedings other than before the appropriate state or federal court in the State of Texas. This guarantee shall be governed by the laws of the State of Texas, without regard to principles of conflicts of laws. Each party irrevocably consents to the jurisdiction and venue of the above identified courts. NOTE: NanoTech shall have no obligation under this guarantee unless and until all bills for installation and supplies have been paid in full to the contractor and materials suppliers, and the guarantee charge has been paid to NanoTech. Failure of the Asset Owner or Applicator to meet the above responsibilities shall render this Warranty null and void and of no effect.

In order for this Warranty to be valid, it must be signed by an authorized representative of NanoTech Materials, Inc., Applicator, and Owner. All signatures constitute acceptance of all terms and conditions of this Warranty.

Applicator By: _____ Title: _____ Date: _____

Printed Name: _____

Owner By: _____ Title: _____ Date: _____

Printed Name: _____

By: NanoTech Materials, Inc 21401 Suite #360 Park Row Blvd Katy, Texas 77449 Title: _____ Date: _____



Formulating the Future

We pioneer new materials for the world's most critical challenges in energy efficiency and fire protection.



info@nanotechmaterials.com



(888) 296-6266

NanoTechMaterials.com