



Nansulate® Crystal PRODUCT DATA/SPECIFICATION SHEET

**Water-based, protective thermal insulation,
UV and mold resistance roof coating**

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Product Description

Nansulate® Crystal is a translucent water-based coating which incorporates a nanotechnology material with an extremely low thermal conductivity. It acts as a barrier to heat transfer, and also provides protection from UV rays and is resistant to growth of mold and algae.

Uses include commercial and residential sloped roofs, on concrete, clay or slate tile roofs and asphalt or wood shingle roofs.

Nansulate® Crystal provides extreme weatherability in a VOC-compliant, field or factory-applied, ambient air-dry system. Additional benefits include excellent thermal insulation for energy savings, resistance to mold or algae, outstanding water repellency, excellent adhesion and easy application.

- Reduces heating and cooling costs
- Prolongs service life of roof
- Long-term resistance to UV
- Resistant to growth of mold and algae
- Environmentally friendly, low VOC
- Clear, matte finish
- Easily applied with paint sprayer, brush or roller.

Nansulate® Crystal is a one-part water-based acrylic latex system. Mixing by hand or slow speed mixer recommended before use. Each coat is applied between 3-5 wet mils in thickness. Three coats is the recommended application minimum, with at least 2-4 hours dry time between coat applications. **Please see product application instructions for detailed application information.**

Limitations

1. Do not apply when temperature is below 50F (10C).
2. Do not install where long-term submersion in liquid or continuous exposure to moisture is a possibility (for instance a flat roof where puddling or standing water occurs regularly)
3. Do not install over poor surfaces, such as those with flaking paint, grease or other contaminates.
4. Do not apply exterior application unless there is no chance of rain or condensation for at least 72 hours.
5. Do not allow application to be subject to below freezing (32F, 0C) temperatures during the first 30 days after application.

Installation

Roof should be pressure washed by a professional prior to application to remove all contaminates. Surface should be completely clean and dry prior to applying the coating. Apply only at temperatures above 50F (10C).

Preferred application methods are by brush, roller, airless sprayer at low pressure or H.V.L.P. sprayer.

Care should be taken during mixing prior to application not to cause particle shear of the nanocomposite.

Preferred method of mixing is using a mixing paddle at slow speed for approximately 2 minutes.

DO NOT thin the product with paint thinner or other medium.

If you are experiencing cracking or peeling during dry, that indicates either excess moisture is present on your surface, or the coats have been applied more thick than the 3-5 wet mil recommendation.

Allow each coat to dry to completely (approx. 2-4 hours) before applying the next coat.

Full insulating benefits are achieved once the product is fully cured. Full cure time is approximately 30 days for a three coat coverage in low to normal humidity. Extra coats and higher humidity will increase dry and cure times.

See product application instructions for detailed application information.

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Product Data

Theoretical Coverage Rate	450 S.F. (41.8 Sq.M.)/Gallon per 1 coat 150 S.F. (13.94 Sq.M.)/Gallon per 3 coats (recommended coverage)
Typical applied coat Thickness	3-5 wet mils (76.2-127 microns) per coat.
Typical thickness of 1 coat	2.5 dry mils (63.5 microns)
Typical thickness of 3 coats	7.5 dry mils (190.5 microns)
Shelf Life	2 years from date of manufacture
VOC content	100 grams/liter
Viscosity	3500 to 4000 (cps)

Product Test Data

Cross Hatch Adhesion - ASTM D-3359	100% 5B
Flame Spread/Smoke Spread - ASTM E84	Class A
Mold Resistance Testing (ASTM D5590 & ASTM G21)	Zero or minimal growth
U/V Exposure	Passed 10+ years in UV aging cabinet testing
Permeability	5 perms/inch @ 23C
Thermal resistance (UNI EN ISO 890:1999)	28.98% increase in resistance
Thermal flow (UNI EN ISO 890:1999)	34.8% decrease in thermal flow through a substrate

Compliance

Does not contain negative Global Warming Potential (GWP) or Ozone Depletion Potential (ODP) ingredients.
Complies with EPA definition of 'low VOC' product.

Submittal Approvals

Job Name: _____

Contractor: _____ Date: _____

Product Information:

See www.nansulate.com for the most up to date information.

SAFETY and WARNINGS:

FIRST AID: In case of skin contact, flush with plenty of water. Remove contaminated clothing. Seek medical attention if irritation develops or persists. For eye contact, flush immediately with large amounts of water. Obtain medical treatment. If swallowed, DO NOT induce vomiting, obtain medical treatment immediately. If inhalation causes physical discomfort, remove to fresh air. If symptoms persist, get medical help. **KEEP OUT OF THE REACH OF CHILDREN.** For additional safety information, refer to Material Safety Data Sheet for this product **IMPORTANT!** Spray equipment must be operated with care in strict accordance with manufacturer's instructions. Use of an approved dust/mist respirator during spray application is recommended. Wear approved dust respirator when grinding or sanding on cured product. Follow respirator manufacturer's directions for respirator use.
IN CASE OF SPILL: Keep material away from drains. Absorb with inert material and dispose of in accordance with applicable regulations.

No warranty, expressed or implied, is given regarding the fitness of this product for a given application. Manufacturer's liability is limited to replacement of defective product. User accepts liability in its use of product.

Trademarks:

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This product is protected by patents in the U.S. and additional countries. Product manufactured in the United States of America.

For warranty information call 800-767-3998 or +1 239-254-0346 or visit www.nansulate.com.

