



Application Methods for Nansulate® High Heat or Nanoboost™

SURFACE PREPARATION

Metallic Surfaces: Remove all loose contamination by wire brushing. Remove all dirt, grease, oil, soluble salts and other contamination by using a suitable cleaner/degreaser and clean water rinse. Remove all loose, flaking rust and/or paint by one of the following standards:

If unable to sandblast use:

St 3 Power Tool Cleaning

If able to sandblast use one of the following:

Sa 1 Brush-Off Blast Cleaning
Sa 2 Commercial Blast Cleaning
Sa 2.5 Near-White Blast Cleaning

Profile shall be 1-1.5 mils in depth and angular in appearance.

Painted Surfaces: Ensure paint is not flaking or peeling. Remove all loose dirt, oil, grease or other contaminants. Abrade the surface prior to Nansulate® application.

Other Surfaces: Remove all loose contamination by wire brushing. Remove any dirt, oil, grease, etc. using a suitable cleaner/degreaser that does not leave a residue.

APPLICATION METHOD

Preferred application method is by brush or paint sprayer. Use either airless sprayer at low pressure, or HVLP (high volume low pressure) sprayer. DO NOT thin product. Product should not require thinning, if necessary a SMALL amount of water only (not to exceed 1/4 - 1/2 cup per gallon) may be used. Excessive thinning will negatively effect the product's properties.

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 3-5 minutes.

The temperature extremes for the substrate to which the material can be applied are 4° C to 100° C (40° F to 212° F). If applying to surfaces over 100° C, see special instructions.

Our minimum recommended application is 3 separate coats. Subsequent coats can be applied for further insulation benefit.

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One gallon (3.79 litres) yields approximately 3 coats over 150-175 square feet (13.94-16.26 square meters) of surface area, depending on surface texture.

It is recommended that each coat be allowed to dry for a minimum of one hour before applying an additional coat. If in high (75%+) humidity environment, allow three hours before applying an additional coat.

Hard dry for a three coat coverage is in approx. 48 hours (normal humidity) and 96 hours (high humidity). Hard dry for a five coat coverage is in approx. 72 hours (normal humidity) and 6 days (high humidity). Full cure time is approximately 30-60 days, depending on climate and humidity.

APPLICATION PROCEDURE

Apply first coat at 100 microns. Allow to dry thoroughly. (see timeframe above)

Apply second coat at 100 microns. Allow to dry thoroughly.

Apply third coat at 100 microns. Allow to dry thoroughly.

Repeat for each additional coat.

Allow application to hard dry (see timeframe above) before stacking, etc.. to allow for proper adhesion.

IMPORTANT: If you are experiencing cracking, peeling, or flaking during initial dry time this indicates your coat application is too thick.

CURE TIME AND TEMPERATURES: The application should not go below freezing (0° C) or above boiling (100° C) until it has had a chance to cure for at least 15 days (normal humidity) or 30 days (high humidity), or you may experience blistering, cracking and/or peeling.

FOR APPLICATION TO SURFACES ABOVE 100° C it is recommended that the first coats be applied as thinly as possible (approx. 30 microns) to prevent blistering. Each subsequent coat may be applied slightly more thick as the first coats will reduce surface temperature. Recommended application would be via paint sprayer, misting. Suggested application for above 100C:

- First coat applied at 30 microns
- Second coat applied at 45 microns
- Third coat applied at 60 microns
- Fourth coat applied at 75 microns
- Fifth coat applied at 90 microns

SAFETY PRECAUTIONS

Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid contact with skin and eyes.

Airless Spray Equipment Recommendations: Graco Silver Gun 395, Titan 440i (or similar) with a 0.011 or 0.013 tip.
Keep pressure low.

The temperature extremes for the substrate on which the material can maintain its integrity after fully cured are:

Nansulate® PT and GP: a low of minus 40° C (minus 40° F) to a high of 125° C (257° F).

Nansulate® High Heat: a low of minus 40° C (minus 40° F) to a high of 204° C (400° F).

Nanoboost™: a low of minus 40° C (minus 40° F) to a high of 204° C (400° F).

Manufacturer's Limited

Warranty: is for 5 years when applied as instructed. See full copy of Warranty for details. (For a copy of full warranty go to www.nansulate.com or call 1-800-767-3998 or +1-239-254-0346.)