

**NANSULATE® EPX**  
**A patented product by Industrial Nanotech, Inc.**

**APPLICATION AND MIXING INSTRUCTIONS**

**PRODUCT DESCRIPTION:** A two component, high build, water-based epoxy protective thermal insulation, corrosion control, fire resistant, and chemical resistant coating designed for use on pipes, tanks, ductwork, drywall, industrial equipment, and other surfaces.

**SURFACE PREPARATION:**

**Metal:** All surfaces must be firm, clean and free of dust, dirt, oil, grease or other contaminants. If rust is present it should be removed by wire brush and treated with a rust neutralizer product. There should be no flaking paint or other contaminants on the surface or adhesion may be adversely effected. **On metal and non-porous surfaces you MUST USE EPX NanoPrime™ as a primer.** It should be applied at no less than 4 coats (each coat applied at 4 mils/100 microns in thickness). IF applications is outdoors and/or subject to UV light, use EPX NanoPrime™ at a 1-coat coverage as a UV resistant top coat.

**Aluminum Surfaces:** Follow same instructions as for Metal surfaces and in addition: Pretreat with conversion coating or Alkaline etching cleaner. Chromium Phosphate cleaner may also be used. Be sure any residue from cleaner is thoroughly rinsed.

**New Concrete:** All surfaces must be firm, clean and well cured before coating. Newly poured concrete must age at least 30 days at temperatures over 70F before coating. Form release agents, curing compounds, salts, hardeners and other foreign matter will interfere with adhesion and must be removed by sandblasting, shotblasting, mechanical scarification or suitable chemical means.

**Old Concrete:** Coating older, uncoated concrete is done in a similar manner to new concrete. Before etching, the concrete surface must be thoroughly cleaned with a strong detergent cleaner to remove all grease, oils, etc.. All loose concrete must be removed. Form release agents, hardeners, etc.. must be removed using the same procedure as for new concrete. Holds and cracks should be filled prior to application. No moisture should be present in the concrete or it may negatively effect adhesion.

**Wood, Plastic and other surfaces:** A clean, sound surface is required. Remove any oils and dirt form the surface using degreasing solvent or strong detergents. Follow with sanding to remove loose or deteriorated surface if needed to obtain the proper surface profile.

**RECOMMENDED SYSTEMS:** One coat at a thickness between 40 -75 mils is recommended. Application thickness can be built up to 1” or more with more coats added after prior coat is completely dry. **If the insulation will be subject to U/V , it should be top-coated with a U/V stable coating to prevent discoloration and/or chalking. EPX NanoPrime™ may be used.**

**MIXING AND APPLICATION INSTRUCTIONS:** Before mixing Nansulate® EPX, it is important that the surface is completely prepared and ready and that all tools and equipment are ready. **Nansulate® EPX has a pot life of 2 hours,** which means that it will begin to set and harden 2 hours after mixing Part A and Part B.

**FOLLOW STEP BY STEP MIXING INSTRUCTIONS CAREFULLY:**

1. Open Part B container, mix at high speed with high speed metal mixing paddle. (High speed = 401 to 1500 RPM)
2. Open Part A container, mix at low speed with low speed metal mixing paddle. (Low speed = less than 400 RPM)
3. After mixing each part separately, as stated above, pour stirred contents of container B into stirred container with Part A.  
Mix Parts A and B together at low speed (less than 400 RPM) with metal mixing blade (Warner Hurricane Mixer, or equivalent) for 5-6 minutes at slow speed until the material is thoroughly blended.
4. Allow mixed components to set for 10 minutes before applying.  
To mix 5 gallon kit: use the same procedure as 2 gallon kit except a larger blade (hurricane mixer designated for 5-gallon container).

## **IMPORTANT!**

**An indicator that you have thoroughly mixed Part A and Part B is to observe the color, and verify that there are no ribbons or spots of dark color from Part B in the mixed pail, and that color is uniform throughout. Improper mixing can cause cracking in the coating as it dries. (If this occurs, you may repair the area by applying EPX over it.)**

Application Temperature Range: 40°F to 110°F (4°C to 43°C)

Pot Life: 2 hours

Shelf Life, unopened: 1 year from date of manufacture

Coverage: 36 s.f. per gallon @ 1 coat, 40 mils/1000 microns in thickness

Coverage rates are approximate. Coverage rates may vary according to surface, equipment used, and application technique.

Mix Ratio A:B 100% of the contents of Part A and 100% of the contents of Part B as packaged.

Dry Time 3 hours – touch dry - ambient  
30 minutes to 1 hour - touch dry - on surface over 212F/100C  
24-48 hours – hard dry (return to service)

Recommended Application Equipment: Texture sprayer, hopper gun or trowel. Use stainless or plastic equipment that is compatible with water-based products.

**CLEANUP:** It is important to clean all equipment, lines, hoses, thoroughly immediately after use. Pot life is 2 hours after mixing, and after this time the product will begin to harden, and will harden inside tanks, hoses, and other equipment if it is not thoroughly removed. Clean equipment, hoses, etc..with soap and water thoroughly.

### **LIMITATIONS:**

- Substrate must be structurally sound, cured and free of bond inhibiting contaminates
- During installation and initial cure cycle substrate and ambient air temperature must be at a minimum of 40°F (4°C). Substrate temperature must be at least 5°F above the dewpoint.
- When required,adequate ventilation and proper clothing shall be used.
- Strictly adhere to published coverage rates.
- Do not thin product with paint thinner or other medium

### **RECOMMENDED SPRAY EQUIPMENT:**

1) Hopper Gun (Drywall Sprayer)

2) Graco TexSpray RTX 1500 Texture Sprayer

In one pass, depending on the tip used it will give approximate thickness of 0.7-1.5 mm. Tip suggestion (6 mm)

**For Application to Hot Equipment and Surfaces Please Review Page 10 of NANSULATE® APPLICATION HANDBOOK: [http://www.nansulate.com/pdf/Nansulate\\_Application\\_Handbook.pdf](http://www.nansulate.com/pdf/Nansulate_Application_Handbook.pdf)**

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