Product Data Sheet

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OVERVIEW:

Thermal insulation, corrosion prevention and moisture resistant coating. Sustainable coating which reduces energy costs and carbon emissions. Indoor and outdoor use. Direct-to-Metal coating for surfaces up to 256F (125C).

Clear, nanotechnology-based insulation and corrosion prevention coating. Long-term performance and durability resulting in lower maintenance costs and longer asset life; reduces asset turnover and waste. Color: Translucent (Clear Coat) with matte finish; allows visual inspection of substrate. For application over metal surfaces.

ADVANTAGES:

THERMAL PERFORMANCE: Excellent thermal insulation performance to maximize control of heat loss, contributing to reduced energy costs. Resistant to moisture infiltration, for consistent thermal performance over time.

CORROSION PREVENTION: Superior corrosion prevention of surfaces. Coating forms a tight bond with the substrate and eliminates issues with corrosion under insulation (CUI). Clear finish allows visibility of substrate through the insulation coating.

ENVIRONMENTALLY FRIENDLY: Non-toxic, non-flammable, water-based coating is low VOC and environmentally friendly. Nansulate® coatings are a sustainable, green technology.

SURFACE TEMPERATURE REDUCTION: Insulates and reduces surface temperatures, making it an excellent safety coating to use for lowering hot surfaces to OSHA safe-touch levels.

WEATHERING: Resistant to moisture and UV. The coating can be used in outdoor environments and performs well in extreme environments.

USES:

✓ Pipes & Pipelines
✓ Tanks
✓ Metal Buildings
✓ Water Heaters
✓ Commercial Ovens
✓ Storage Containers
✓ Dyeing Machines
✓ Safe Touch Application on Hot Equipment ✓ Valves, Joints and Other Formerly Difficult To Insulate Areas
✓ Other Metal Surfaces

BENEFITS:

✓ Energy savings
✓ Reduces carbon emissions
✓ Can be applied while in service
✓ Cost effective, with long-term savings and short payback period (Reported at 6-18 months)
✓ Non-toxic, water-based, low VOC
✓ Excellent corrosion prevention
✓ Outstanding durability and weathering
✓ Easily applied by brush, roller or paint sprayer.
✓ Ideal for equipment that is not easily insulated by rigid or fibrous insulation
✓ Space saving – each coat is applied at 4 wet mils; a 10-coat application will dry to 20 dry mils
✓ Can be painted over
✓ Provides protection from harmful UV rays
✓ Direct-to-metal with no primer needed
✓ Easy cleanup with soap and water

Gold Standard Application Program

With your order, we provide you with personalized support to ensure the success of your Nansulate® application. Contact us to learn more!

www.qes-usa.com

Quantum Energy Services

INDUSTRIAL NANOTECHINC
A GLOBAL LEADER IN NANOSCIENCE SOLUTIONS

NANSULATE® PT Translucent
THE ULTIMATE INSULATION & CORROSION SOLUTION

PRODUCT DATA:

Theoretical coverage rate for One Gallon (3.79 Liters)	Yields approximately 4 mils/100 microns wet film thickness (1 coat) over 450 square feet (42 square meters) of surface area, depending on surface.
Coverage rate for typical application thickness for One Gallon (3.79 litres)	Yields approximately 24 mils/600 microns wet film thickness (6 coats) over 75 square feet (7 square meters) of surface area, depending on surface. 4 wet mils (100 microns) per coat
Typical applied coat thickness	
Typical dry film thickness (DFT) of 1 coat	2 mils (50 microns) DFT
Typical application thickness (DFT) of 6-10 coats	12-20 mils (300-500 microns) DFT
Typical touch dry time for 1 coat	1 hour
Typical hard dry time	72 hours
Typical full cure time	30-90 days, dependent upon DFT and environmental variables
Shelf life	2 years, from date of manufacture
VOC content	100 g/L (calculated)
Viscosity	3500 to 4000 (cps)
Cross Hatch Adhesion - ASTM D-3359	0% 5B, edges remain smooth, no flaking
Pull Apart Strength - ASTM D-4541	2400-2450 psi
Flame Spread/Smoke Developed - ASTM E84	Class A
U/V Exposure	Passed 2000 hours
Accelerated Salt Fog Corrosion Test (GM9540P)	Completed 24 cycles, no rust present *The GM9540P Accelerated Corrosion Test is an advanced cyclic method originally developed by General Motors and now the corrosion test preferred by the US. Navy. Passing 8 cycles is considered the standard for an anticorrosion coating.*
Permeability	5 perms/inch @ 23 deg C.
Thermal conductivity (BC/BP/JC issue 1 rev.	No visible signs of cracking, flaking or disbondment. Temperature difference at internal temperature of 120℃= 28℃
C)CUI Exposure Test (BC/BP/JC issue 1 rev.	No visible signs of cracking, flaking or disbondment. Consistent insulation performance over 100 day test.

C)

LIMITATIONS:

Do not use as a final floor covering.
Do not install where long-term submersion in liquid or continuous exposure to moisture is a possibility.
Do not install over poor surfaces, such as those with flaking paint, grease or other contaminates.
Do not allow application to be subject to rain or condensation for at least 72 hours.
Do not allow application to be subject to freezing temperatures during first 30-60 days.
Do not apply full recommended thickness on surfaces over 212F/100C. Use "Hot Surface" Application; refer to Application Handbook for further details.
*Do not rely on visual measurement for coating thickness. Always use a wet film thickness (WFT) and/or dry film thickness (DFT) gauge in several areas to ensure proper application DFT. See Application Handbook for further details.

NOTE ABOUT CURE TIME:

The product reaches full insulating ability after a cure time of approximately 30-90 days, which is dependent upon DFT and environmental variables. Test of thermal performance should be performed after full cure. Thermal benefits will typically begin to be seen approximately two weeks after application, and will continue to improve as the cure time completes. Final cure is complete when thermal performance has reached a steady state.