



APPLICATION TECHNOLOGY

NanoPrime™ Primer Coating

NanoPrime™ is a high performance coating to be used as an excellent base for:

Water based Epoxy
Epoxy with 100% solids
Water based Polyurethanes
Low VOC coatings
Coatings specifically approved by NanoRustX

SURFACE PREPARATION WITH OR WITHOUT RUST:

LIGHT CLEANING – SSPC-SP WJ-4 pressure water wash at 3,000-3,500 psi (207-241bar) prior to application of primer. Use of a phosphate free cleaner to remove oil residue may assist in this process. Surfaces must be free of visible deposits of oil, grease, dirt, loose rust and coating or other materials that may interfere with coating adhesion.

If mill scale is present after light cleaning, prepare the surface to SSPC-SP3 standard and repeat light cleaning per SSPC-SP WJ4.

If solvent-soluble foreign matter exists on the surface, remove per SSPC-SP1, then remove all traces of solvents per SSPC-SP WJ-4 pressure water wash.

Surface rust that is not removed by light cleaning can remain.

NanoPrime™ can be applied to rusted surfaces with greater than 50 microns of rust. To obtain optimal adhesion, it is recommended to clean surface to SSPC-SP-3 to remove loose rust, scale and deteriorated coatings to obtain a sound rusted surface. Pressure wash surface. Increase the wet film thickness of Primer #2 to 175 – 200 microns.

SURFACES WITH OLD PAINT (and rust):

In areas with loose paint flakes and or rust pockets, prepare the surface to SSPC-SP-3 surface standard using power wire brushing, and pressure wash surface to SSPC-SP-WJ4.

APPLICATION INSTRUCTIONS:

NanoPrime™ can be applied to damp degreased rusty surfaces.

Surface temperature must be at least 5° F (3° C) above the dew point for application.

Surface temperature must be between 10°C (50°F) and 73°C (163°F)

SURFACES WITH LESS THAN 50 MICRONS OF RUST:

A) Primer #1	Wet film thickness	120 – 140 microns
	Dry film thickness	Approx. 50 - 60 microns
B) Primer #2	Wet film thickness	150 - 175 microns
	Dry film thickness	Approx. 60-70 microns

SURFACES WITH GREATER THAN 50 MICRONS OF RUST:

Increase the wet film thickness of Primer #2 to 175 – 200 microns. (60-70 microns DFT)



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SURFACES WITH OLD PAINT AND RUST:

Spot prime **rust pockets** (125 – 150 microns WFT) and allow to dry for 10 – 15 minutes. Coat entire area following directions for “Surfaces with less than 50 microns of rust”. The chemical components of **NanoPrime™** include Nano particles that actively react with existing paint to form a reinforced anti-corrosive structure.

When applied over existing paint, **NanoPrime™** will react with compatible paints. With some existing paints, white staining phosphate deposits may occur as a result of this reaction. This is only cosmetic and will not affect the performance of the paint. Compatibility is determined by the absence of bubbles after primer #1 dries and by adhesion testing.

NanoPrime™ cannot be applied over silicon-based paints.

RECOMMENDED DRYING TIMES AT 75% HUMIDITY

Temp	1 st Layer	2 nd Layer
10-15 °C (50-59°F)	4 Hrs	4 Hrs
15-20 °C (59-68°F)	3 Hrs	3 Hrs
+23 °C (+73°F)	2 Hrs	2 Hrs

It is important to wait for complete drying time of each layer before applying subsequent layers. At higher humidity levels drying time may increase by 25 – 50%.

When coating in an enclosed area, ventilation must be provided to facilitate proper drying.

Allow 48 hours to dry before rain or other application of water to the surface to provide ample time for initial polymerization to take its course.

When preparing samples for testing, wait a minimum of 7 days to allow the coating to start to cure. Cure to full strength requires 30 – 45 days.

The product should be stored away from direct sunlight at temperatures of 3^o C to 45^o C. **DO NOT ALLOW TO FREEZE.**

NEVER store **NanoPrime™** in **metal containers**, as the coating will react with metal and affect its active ingredients. Confirm coating is thoroughly mixed before pouring from a large container into a smaller one.

RECOMMENDED APPLICATION TOOLS:

Use water to clean application equipment prior to coating. If solvents must be used to clean equipment rinse equipment thoroughly with water to remove all solvents prior to coating.

Airless spray gun: 0.017"- 0.21" Nozzle size (Gun and nozzle must be stainless steel)
Operating pressure 1,800-2,200 psi (124-152 Bar) nozzle pressure.

Brush: Natural bristle

Roller: 3/8" nap, no-lint cover



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DO NOT DILUTE NanoPrime™

PROPER MIXING OF NanoPrime™ BEFORE USE IS IMPORTANT

NanoPrime™ is thixotropic – it settles and gets thicker during storage. Use the NRX™ mixing disc with a diameter of approximately 1/3 the diameter of the pail. Insert mixing disc into container until it is approximately 1-2" from bottom of container. Mix the coating for approximately 10 minutes at a rate that enables a vortex without drawing air into the coating. Coating is properly mixed when lifting the mixing disc out of the material the coating flows like oil without dripping. As the coating will thicken in storage, confirm there is no material on the side walls or the bottom of the container during the mixing process. Re-mix daily before use.



Use a mixing disc with a diameter of approximately 1/3rd the diameter of the pail.



Use a slow mixer (200-300rpm) and create a vortex without drawing air into the coating.



Coating is properly mixed when removing the mixing disc from the pail, the coating flows smoothly like oil without dripping.

As the coating will thicken in storage, confirm there is no material on the side walls or the bottom of the container during the mixing process. Re-mix daily before use.

Use the right tools and equipment to guarantee good results!

80 Holmes Street, Belleville, New Jersey 07109 | 973.751.2200

Email: sales@nanorustx.com

Web: www.nanorustx.com

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