



NSP SPECIALTY PRODUCTS

Technical Data Sheet

NSP 900XT Flake Filled Novolac Epoxy Coating

Description: NSP 900XT, a two component, 100% solids, flake filled novolac epoxy coating, offers excellent chemical, corrosion and abrasion resistance in severe industrial environments. This novolac epoxy binder and overlapping flake fillers provide the low permeability, high film integrity, and excellent chemical resistance required for prolonged protection on steel and concrete surfaces.

Intended

Uses: Secondary Containment, Structural Steel, Floors (Spillage), Storage Tanks, Pump Housings

Product

Features:

Meets all VOC requirements
Can be filled with aggregate for ¼” trowel down
Can be seeded with sand or aluminum oxide for non-skid finish
Chemically resistant to inorganic acids, alkali solutions, oils, solvents and 98% Sulfuric Acid
Can saturate 1 ounce fiberglass mat

Physical

Data:

Type: Modified Novolac Epoxy Resin/Proprietary Aliphatic Amine Hardener
Color: Dark, Medium and Light Gray, Dark and Light Blue, Tile Red, Tan, Beige
Components: Two
Primer: NSP 107 Novolac Primer @ 3-4 mils WFT
Mixed Ratio: Part A Resin 1 gallon: Part B Hardener 52 fl. oz
Volume Solids: ASTM D-3960 < 50 g/l
Recommended Spread Rate for concrete and steel 75-100 sq/ft/gal per coat
Spread rates shown are for estimating purposes only. Actual field usage may vary.
Pot life of the mixed 900XT will depend on the temperature. To prevent material waste and avoid damage to equipment, do not mix more material than can be used according to the following table:

TEMPERATURE	POT LIFE
50°F	65 min.
70°F	40 min.
90°F	20 min.

This material develops high exotherm when in mass. It is recommended that a pail of water be accessible to put residual mixed material into if not totally used.

Catalyzed material must never be left unattended!



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Physical

Data:

Maximum Recommended Service Temperature:
Continuous Dry Air Temp. 250 Deg F – Intermittent: 300 Deg F
Immersion: Up to 130 Deg F

Cure Cycle

TEMPERATURE	RECOAT TIME		CURE TIME
	MIN.	MAX.	
50°F	14-16 hrs.	120 hrs.	96 hrs.
75°F	8-10 hrs.	72 hrs.	36 hrs.
90°F	5-7 hrs.	48 hrs.	24 hrs.

If these recoat times are exceeded, consult a NSP representative; sanding or abrasive blasting may be required before the next coat. Recoat times are dramatically reduced when the coating is exposed to direct sunlight.

Physical Properties and Performance

PROPERTY	TEST METHOD	RESULT
Tensile Strength	ASTM C-307	3000-3500 psi
Compressive Strength	ASTM C-579	9000-9500 psi
Flexural Strength	ASTM C-580	5000-5200 psi
Hardness, Shore D	ASTM 2240	80-85
Abrasion Resistance	ASTM D460, 1000 g Load 1000 cycles	50 mg
WVT	ASTM E-96	0.0018 perm in
VOC	ASTM D-3960	< 50 g/l
Flame Spread	ASTM D-635	<5 mm

Limitations:

This product may not cure properly in temperatures below 50 F (10 C)
All epoxies will show chalking/yellowing on exterior exposures. Application of epoxy coatings in cool temperatures and high humidity can result in the formation of amine blush. Blush may appear as a milky, white, tacky residue on the surface of the cured coating and must be removed before the application of another coat. Intercoat adhesion problems may occur if blush is not removed. If present, remove by washing with warm water and detergent. Remove all residue and allow to dry before proceeding with next coat.
Application of NSP 900XT in direct sunlight may lead to blistering, pinholes, or wrinkling due to outgassing of air in the concrete and high substrate temperatures. Double priming, shading, or evening application may be required. Consult your NSP representative.



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Surface

Preparation: Steel – *Immersion Service:* SSPC-SP5 White Blast Cleaning with 3.0-mil profile
Non-Immersion Service: SSPC-SP10 Near White Metal Cleaning with 2.0 mil profile
Atmospheric Service: SSPC-SP6 Commercial Blast Cleaning with a 2.0 mil profile

Testing: Where immersion service is required, spark test the coating with a 5000 volt AC spark tester. Mark and repair all pinholes and retest only the repaired areas.

Concrete – Concrete must be properly cured for a minimum of 28 days before application of coating. Surface must be entirely free of oil, grease, dirt, detergent, surface water, laitance, curing compounds, coatings or other contaminants that may interfere with adhesion. The concrete must be abrasive blasted to provide an anchor pattern (similar to 40-60 grit sandpaper min.) for adhesion. Final prepared surface should be clean and rough. Consult SSPC-SP13 – Surface Preparation of Concrete. Additional surface preparation will be required if 40-60 grit texture with exposed pea gravel is not achieved and the surface laitance not completely removed with the first mechanical preparation procedure. Exposed aggregate or voids must be filled prior to application of 900XT with appropriate NSP filler.

Mixing

Instructions: This is a two-component system. Prior to mixing, components A Resin and B Hardener should be at room temperature (60-75 F/16-24C). It is recommended that Part A Resin be mixed for 1-2 minutes prior to adding Part B. Pour Part B Hardener into Part A Resin. Mix for 3 minutes using a Jiffy mixer head and a mechanical drill. To ensure complete mixing, scrape sides and bottom of container and continue mixing for an additional 1 or 2 minutes. Do not mix more material than can be applied within the pot life. **DO NOT HAND MIX.** Begin application immediately – no induction time. **This material develops high exotherm when left in the pail or mass. It is recommended that a pail of water be accessible to put residual mixed material into if not totally used. Do not leave mixed material unattended. Do not attempt to store mixed material.**

Application: Air and surface temperature should be between 50-90F/10-32C. Do not begin application if air, substrate or material temperature is below 50 F/10C or expected to fall below 50F/10C within 12 hours of application. Do not begin application if dew point is within 5F/3C of the temperature. Variations in temperature can affect pot life and sag properties of this material. Clean up using Acetone or other Ketone Solvent. All surfaces to be coated should be primed with NSP 107 100% Solids Epoxy Primer or NSP 110 Clear Primer Topcoat depending upon actual NSP Coating system. Consult your NSP representative for proper primer selection.

Method of

Application: Brush, Phenolic Core Roller (Brush or Roller Application may require additional coats to meet the desired dry film thickness) Airless Spray



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Recommended

Equipment:

Airless Spray

Binks Airless Spray gun with Reverse-A-Clean Tip is recommended. The nozzle should be tungsten carbide with a 0.017 – 0.035 inch diameter opening and a 25 Deg to 60 Deg fan. Suggested output pressure depending on temperature is 1500 psi.

Pump - 45:1 with 60 mesh filter or larger

Tip Range - .023 to .027

Hose - 3/8" I.D. if less than 50 ft. - greater than 50 ft. use 1/2" (3500 psi High Pressure Spray Hose)

Pressure (in) 90 cfm minimum @100 psi

Pressure at the tip - increase pressure slowly to 2000 psi and fine tune to achieve proper spray pattern. Check condition of fan at spray tip. During the first seconds of spraying, the material will often finger. Raise or lower pressure to adjust width. Periodically check pressure gauges while spraying. Knowing operating pressure will be useful in analyzing any changes to your spray pattern.

Whip – 3'- 5' and 1/4" ID Hose

Take care to prevent mixed material from setting up in hoses. For optimum results, keep hose as short as possible, out of direct sunlight or away from heat. Purge immediately after spraying with Acetone or Ketone solvent. Cured material must be mechanically removed.

Storage &

Shelf Life:

Shelf life is 6 months from the date of manufacture when stored in unopened containers and under recommended conditions. Material should be stored in a dry area under cover at temperatures between 50-75 Deg. F. It is recommended that the coating components be kept inside at a minimum of 60F/16C for 24 hours prior to start of application. Keep away from heat, flame and ignition sources. Storage in direct sunlight or excessive heat will reduce working time and shelf life.

Warning &

Safety:

FOR INDUSTRIAL USE ONLY – KEEP AWAY FROM CHILDREN

Refer to Material Safety Data Sheet for NSP 900XT Part A and B supplied with this product prior to application. MSDS may be obtained via web site at www.nsp-specialty.com, fax 910-235-3902 or by calling 800-248-8907. Use only with adequate ventilation and avoid breathing mist or vapors. Prevent contact with skin and eyes with protective clothing/impervious gloves and goggles. Do not take internally. Wash thoroughly after handling



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