

**SECTION 4**

**PROCESS INFORMATION**

**Attachment 4-1  
Floor Coating Technical Data**

**MIXED WASTE FACILITY  
RCRA/TSCA PERMIT APPLICATION**

**PERMA-FIX NORTHWEST RICHLAND, INC.**

**RICHLAND, WASHINGTON**



# NSP SPECIALTY PRODUCTS

## Technical Data Sheet

### NSP 100 Epoxy/Concrete Sealer

**Description:** NSP 100 Epoxy/Concrete Sealer is a deep penetrating primer used to promote the adhesion of various NSP topcoats to dry or damp concrete surfaces. Its extremely low viscosity allows for permeation into the concrete with easy application by roller or spray.

**Intended**

**Uses:** Primer for horizontal and vertical concrete surfaces. Increases bond of coating system over surfaces that may be contaminated with oils.

**Product**

**Features:** Superior adhesion to concrete – low build formula  
Moisture tolerant  
Ease of application – brush, roller or spray  
Provides chemical and mechanical bond with topcoat provided recoat times are observed.

**Physical**

**Data:** Type: Modified Epoxy Resin/Proprietary Blend Amine Adduct Hardener  
Color: Clear  
Components: Two  
Mixed Ratio: 2 Parts A (Resin): 1 Part B (Hardener) by volume  
Volume Solids: 50% - VOC 3.32 lbs./gal  
Pot Life @ 77F/25C: 90 minutes  
Application Temperatures: 50-90F (10-32C)  
Minimum Recoat Time @ 77F/25C: 1 hour  
Maximum Recoat Time @ 77F/25C: 48 hours  
Recommended Spread Rate: 150-350 sq/ft/gal - Actual dry film thickness may vary due to the porosity of the concrete  
Thinner: Do not thin  
Packaging: Pre-portioned 3 Qt. Kit/ 3 Gal Kit

**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.



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## NSP 100 Epoxy/Concrete Sealer

### Surface

#### Preparation:

New 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 60-80 grit sandpaper min.) for adhesion. Final prepared surface should be clean and rough. Consult SSPC-SP13 – Surface Preparation of Concrete.

Old Concrete - 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 60-80 grit sandpaper min.) for adhesion. Final prepared surface should be clean and rough. Consult SSPC-SP13 – Surface Preparation of Concrete. Do not use NSP 100 as a primer over tightly adhered old coatings.

### Mixing

**Instructions:** This is a two-component system. COMPLETE UNIT MUST BE MIXED AND APPLIED AT ONE TIME. DO NOT MIX PARTIAL QUANTITIES FROM CONTAINERS OR PROPER COMPONENT RATIOS MAY NOT BE OBTAINED. Prior to mixing, components A Resin and B Hardener should be at room temperature (60-75 F/16-24C). 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 minute. DO NOT HAND MIX. Begin application immediately – no induction time.

**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 of this material. Clean up using Acetone or other Ketone Solvent.

### Method of

**Application:** Brush, Phenolic Core Roller, Airless Spray

### Storage &

**Shelf Life:** FLAMMABLE LIQUID – KEEP AWAY FROM HEAT, FLAME AND POSSIBLE IGNITION SOURCES. Shelf life is 12 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 45-95F/7-35C. It is recommended that the coating components be kept inside at a minimum of 60F/16C for 24 hours prior to start of application. Do not let product freeze.



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Technical Data Sheet

## NSP 100 Epoxy/Concrete Sealer

### Warning & Safety:

**FOR INDUSTRIAL USE ONLY – KEEP AWAY FROM CHILDREN – FLAMMABLE LIQUID**  
Refer to Material Safety Data Sheet for NSP 100 Part A and B supplied with this product prior to application. MSDS may be obtained via web site at [www.nsp-specialty.com](http://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.

### Disclaimer & Limited Warranty:

The information contained herein is intended to acquaint you with this product and is not intended to be exhaustive. This information is subject to modification from time to time without further notice. No agent, employee or representative of Seller has the authority to bind Seller to any oral affirmation, recommendation or representation of warranty unless contained in a written agreement signed by both Buyer and Seller. Seller expressly disclaims all other warranties, express or implied, including but not limited to any implied warranties of merchantability of fitness for a particular purpose or any other warranties relating to the condition of this product. Furthermore, Buyer acknowledges that it is familiar with and experienced in the use of industrial coating products and expressly assumes all responsibility resulting from or in any way connected with the possession, transportation, handling or use of this product, whether singly or in combination with other products. Seller's liability, with respect to any claim arising out of or relating to Buyer's purchase, possession or use of this product, is expressly limited to, at Seller's option, (i) replacement of the product, or (ii) return of the purchase price with transportation charges incurred by the Buyer, if material is proven defective. Any claim for defective product must be received in writing within one year from the date of shipment. Seller assumes no responsibility for incidental or consequential damages, or for any other damages related to any alleged nonconformity or defect in the product or to its purchase, possession or use.



# NSP SPECIALTY PRODUCTS

## Technical Data Sheet

### NSP 122 Industrial Floor Coating

**Description:** NSP 122 is a two-component, high performance, self-leveling epoxy floor coating. This 100% solids formulation provides excellent protection for areas exposed to the harsh effects of abrasive traffic, impact and chemical exposure. With proper application, NSP 122 effectively restores and protects new and old concrete floors leaving a smooth durable finish that is easy to maintain. Full cure in twelve hours makes NSP 122 the ideal choice for maintenance projects on a fast track.

#### Intended

**Uses:** New construction or concrete restoration projects – Commercial Garage Service  
Manufacturing Areas and Aisles  
Aircraft Hangers - Clean Rooms – Hospitals – Restaurant Kitchen Floors

#### Product

**Features:** Moisture Tolerant- 12 hour Full Cure  
Offers less downtime than most generic coatings  
Glass filled for enhanced toughness  
Tenacious adhesion on properly prepared surfaces  
Tile like high gloss finish easy to clean  
Self-leveling, easy application with squeegee and roller  
Environmentally sound  
Available in a variety of standard colors

**Approvals:** Accepted for use by the USDA in Federally Inspected Meat/Poultry Plants  
Accepted by the Canadian Food Inspection Agency in Registered Establishments

#### Physical

**Data:** Type: Modified Epoxy Resin/Proprietary Blend Amine Adduct Hardener  
Color: White, Black, Tile Red, Light, Medium and Dark Gray. Safety Colors and other non-standard colors available upon request  
Components: Two  
Gloss: High  
Mixed Ratio: 2 Parts A (Resin): 1 Part B (Hardener) by volume  
Volume Solids: 100% - VOC 0 lbs/gal  
Pot Life @ 77F/25C: 30 minutes  
Maximum Recommended Service Temperature: Dry Air 300F/149C  
Application Temperatures: 50-90F (10-32C)



# NSP SPECIALTY PRODUCTS

## Technical Data Sheet

### NSP 122 Industrial Floor Coating

**Physical Data:**

Minimum Recoat Time @ 77F/25C: 6 hours  
 Maximum Recoat Time @ 77F/25C: 48 hours  
 Minimum Cure Time – Full Service @ 77F/25C: 12 hours  
 Theoretical Coverage: 1604 sq/ft/gal/mil – Allow for appropriate loss  
 Minimum Recommended Thickness: 10 mils  
 Recommended Spread Rate: Dependent upon concrete porosity, service environment and desired aesthetic.  
 Maximum Thinner: Not recommended  
 Packaging: Pre-portioned 3 Qt. Kit/ 3 Gal Kit/ 15 Gal Kit

#### Physical Properties and Performance

PROPERTY	TEST METHOD	RESULT
Tensile Strength	ASTM D638	5600 psi
Compressive Strength	ASTM D695	11700 psi
Flexural Strength	ASTM D790	8900 psi
Adhesion to Concrete	ASTM D4541	Substrate Failure
Adhesion to Steel SSPC-SP10	ASTM D4541	>1200 psi
Adhesion to Damp Concrete	ASTM D4541	>350 psi Substrate Failure
Tensile Elongation	ASTM D638	5%
Hardness, Shore D	ASTM 2240	90
Abrasion Resistance	ASTM D460, 1000 g Load 1000 cycles	37.7 mg Average Wt. Loss
Flame Spread	ASTM E84	Class A
Flammability	ASTM D635	Self Extinguishing

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**Surface**

**Preparation:** 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 60-80 grit sandpaper min.) for adhesion. Final prepared surface should be clean and rough. Consult SSPC-SP13 – Surface Preparation of Concrete.



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### NSP 122 Industrial Floor Coating

#### 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). 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 required.

**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 properties of this material. Clean up using Acetone or other Ketone Solvent. For concrete surfaces, a primer coat of either NSP 100, 101 and 110 is strongly recommended

#### Method of

**Application:** Brush, Phenolic Core Roller, Airless Spray

#### Warning & Safety:

##### **FOR INDUSTRIAL USE ONLY – KEEP AWAY FROM CHILDREN**

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##### Limited Warranty:

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## NSP SPECIALTY PRODUCTS – COATINGS AND LININGS CHEMICAL RESISTANCE CHART

Chemical	NSP 120	NSP 122/125
Acetic Acid 5-15%	2	2
Acetone	2	2
Alcohols	1	1
Ammonia	1	1
Ammonium Nitrate	1	1
Black Liquor	1	1
Brake Fluid	1	1
Chlorine Water	1	1
Citric Acid 10%	1	1
Crude Oil, Sour & Sweet	1	1
Diesel Fuel	1	1
Ethanol	1	1
Ethylene Glycol	1	1
Ferric Chloride 1%	1	1
Gasoline, Refined - All	1	1
Hydraulic Fluid	1	1
Hydrochloric Acid 0-37%	2	2
Jet Fuel	1	1
Kerosene	1	1
Lactic Acid 5-15%	1	1
Methylene Chloride	4	4
Methyl Ethyl Ketone	2	2
Methanol	3	3
Mineral Oil	1	1
Mineral Spirits	1	1
Nitric Acid 0-30%	2	2
Phosphoric Acid 0-40%	1	1
Pulp Mill Liquors	1	1
Skydrol	1	1
Sodium Hydroxide 0-50%	1	1
Sodium Hypochlorite 0-15%	2	2
Sulfuric Acid 0-70%	1	1
Sulfuric Acid 98%	4	4
1, 1, 1 Trichloroethane	2	2
Turpentine	1	1
Urea (0-50%)	1	1
Vegetable Oils	1	1
Vinegar	1	1
Water – DI, Salt	1	1

**Legend:**

- 1. Constant Immersion, contact, flow
- 2. Secondary Containment, 72 hrs.
- 3. Intermittent Spills, 24 hrs.
- 4. Not Recommended

Chart is only intended for use as a guide against chemical attack.

Individual applications should be evaluated for actual service according to its own temperatures and concentrations.

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