



# APPLICATION PROCEDURE

## PERMAKOTE PLUS®

### LIMITED PONDING WATER ROOF COATING

### CONCRETE ROOFING SURFACE

**Slab • Overlay • Pre-Cast • Cementitious • Locked Gravel • & More**

**ENERGY STAR PARTNER**  
**APPLICATION PROCEDURE #PLS-C**  
**6 YEAR LIMITED MATERIAL WARRANTY**  
**Page 1 of 2**  
**02/21/11**  
*superseding: 02/17/10*

#### MATERIAL ESTIMATION:

CHLORINE Water Mixture	5 gallons per 100 square feet	Approximately 2 quarts chlorine per 4½ gallons water
PERMAPATCH™	1 gallon fills 144 cubic inches	Caulk and Seal all penetrations 1/8" to 3/4"
CONCRETE or CONCRETE FILLER or other COMPOUNDS or CAULKS to fill areas greater than 3/4"		
PERMATAPE™ (2"¼"x8"x100')	Tape any seams if necessary; Use PERMABOND™ as Saturant*	
*Add additional PERMABOND™ as Saturant for Tape as follows: 1/4 gallon per 2" Roll - 1/2 gallon per 4" Roll - 1 gallon per 8" Roll		
PERMAMAT™ (36"x100')	(Optional) Mat; Use PERMABOND™ as Saturant*	270 square feet per roll; overlap 4"
*Add additional PERMABOND™ as Saturant for PERMAMAT™: 3 gallons per 36" x 100' Roll		
PERMABOND™ PRIMER	100-150 square feet per gallon	1 Coat is Required
PERMAKOTE PLUS®	100-125 square feet per gallon per coat	2 Coats are Required

Material Estimations are Approximate and Can Vary and Differ from Job to Job and Are Not Guaranteed to be Correct Due to Many Variables.

#### WARRANTY CONFORMANCE:

A Warranty Registration Certificate Form Must Be Submitted within 90 days of Completed Application. Confirm Specific Minimum Acceptable Product Spread & Usage Rates for Warranties stated on the Warranty Registration Certificate Form. Roof Surfaces greater than 10,000 square feet requires a Job Completion Form. Request Forms before Application of Any Coating. The PERMAKOTE PLUS® Warranty and Application Procedure are for Well Drained, Flat Roofing Surfaces that: do not accumulate any ponding, standing or settling water in excess of ½", no ponding water regardless of depth can remain longer than 72 hours, no negative slope or negative pitch may be present on roof surface, drip edge must not be higher than ½" above roof surface, and roofs with parapet walls must have adequate drainage and/or scuppers to remove water. Warranty will be void if these criteria are not met.

#### WARRANTY TERMS:

A Limited Material Pro-Rated Warranty for Chipping, Cracking and Peeling, ONLY:  
**PERMAKOTE PLUS® 6 Years**  
*(Well-Drained, FLAT & Level Roofing Surfaces with NO Ponding, Standing or Settling Water In ANY AREA of the Roof Surface exceeding ½")*

#### GETTING STARTED:

All coatings must be stirred manually or mechanically before being used (except for PERMAPATCH™). Do not let products freeze. Do not use any of these products at temperatures below 45 degrees Fahrenheit. Apply all products to dry surfaces only and do not apply products when they will be subjected to rain, high humidity or heavy dew before they have had enough time to dry (check Product Data Sheets). Do not thin any products unless specifically mentioned in this Application Procedure or Product Data Sheets.

#### **STEP#1: VISUAL INSPECTION and REPLACEMENT of DAMAGED BUILDING MATERIALS**

The substrate to be coated must be in SOUND condition. Physically inspect the surface area for missing or damaged building materials. Replace and/or repair all damaged areas back to sound and solid condition. This Application is not for metal roofs and will not seal rust, any rust must be treated before coating is applied, inquire about METAL-PRIME RED-OX™ Rust Treatment Process. Inspect for any existing leaks and be sure to repair leaks prior to the application of coating. You may use PERMAKOTE® on roofing surfaces having a slope greater than 1 inch per 24 inches or greater than a 4 degree angle, and that do not pond or hold any standing water at all. Only PERMAKOTE PLUS® can be used on flat and level roofing surfaces, but the surface can not hold or have any more than ½" of standing water in any area of entire roofing surface (Please inquire for limitations). Fill in any low spots to achieve a level surface. Roof must completely drain; proper drainage is essential before any coating is applied. Make sure roof is adequately vented, or condensation leaking can occur.

This coating is not intended to stop and/or repair any past, present or future leaks and is not guaranteed to do so. Leaks, Labor and Quality of Workmanship are not warranted and will be the sole responsibility and liability of the applicator/contractor. Check with a licensed roofing contractor if necessary.

#### **STEP#2: PRESSURE CLEANING**

High Pressure Clean entire roof surface with at least 2500 P.S.I. of pressure using a water and chlorine solution (approximately 2 quart chlorine to 4½ gallons of water). Thoroughly remove all dirt, oil, grease, residues, mold, mildew, algae and any other surface contaminants. Severe mildew requires a stronger concentration of chlorine and scrubbing with a broom, roof brush or other agitating apparatus. When roof is completely cleaned, rinse with water only. Let roof surface dry at least 12 hours before continuing.

The PERMAKOTE PLUS® SYSTEM has excellent mildew resistance, but the system products WILL NOT KILL mildew already on the surface.

#### **STEP#3: REPAIRING SURFACE & PATCHING IMPERFECTIONS (1/8" to 3/4")**

After surface has thoroughly dried, Patch and Caulk all cracks, crevices, fractures, holes, valleys, vents, voids, etc., with PERMAPATCH™. Use a trowel or stiff brush to apply. Multiple coats are better than one thick coat if possible. The thicker PERMAPATCH™ is applied, the longer it will take to dry. Wait at least 4 hours before applying a second coat of PERMAPATCH™ and let final application dry at least 24 hours before continuing to next step. PERMAPATCH™ dries from top to bottom, so be careful when working around a caulked area since it will be skin dry. There is no problem coating over PERMAPATCH™ even if it is not completely dry, since it is a high solids material.

Use Concrete, Concrete Filler, Hydraulic Cement or other type Caulk or Compound to fill any gaps or areas that are 3/4" or greater.

PERMAPATCH™ has minimal shrinkage, but the thicker PERMAPATCH™ is applied the more chance it has to shrink, check after 24 hours and apply additional PERMAPATCH™ if necessary.

As an ENERGY STAR® PARTNER, Nationwide Chemical Coating Mfrs., Inc. has determined that select products meet or exceed the ENERGY STAR® guidelines for Energy Efficiency.

In Any Event Nationwide Chemical Coating Manufacturers, Inc. will not be liable or responsible for any past, present or future leaks or any resulting consequential or incidental damages.



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 Page 2 of 2

**NATIONWIDE CHEMICAL COATING MFRS., INC. • 7106 24<sup>th</sup> Court East • Sarasota, Florida 34243 • U.S.A.**

**STEP#4: MATTING One-Ply Polyester Waterproofing and Reinforcement Roof Mat (If Applicable, otherwise proceed to STEP#5:)**

Tape all visible seams, valleys, joints, large cracks & fractures prone to water intrusion on roof surface. Apply a liberal coat of PRIMER (PERMABOND™) at 12-16 mils wet film thickness, directly to the affected area using: 1- brush, 2- at least a one inch nap roller, or 3- at least a one gallon per minute piston type airless sprayer with a .021 minimum tip size. Remove all line filters and gun filters before spraying. Lay the PERMATAP™ directly onto the WET PRIMER. Mat must be put down before PRIMER has had a chance to start drying (approximately 15 minutes). Overlap Mat at least 4 inches. After all areas are matted let dry for 2 to 4 hours. Apply a second light coat of PRIMER at 6-8 mils wet over the top of the mat. Let dry for at least 2 hours before continuing. If a full PRIMER coat (Step#6:) is applied the second light coat of PRIMER is recommended but not required. Continue to PRIMER coat (Step#6:).

**STEP#5: TAPING SEAMS (If Applicable, otherwise proceed to STEP#6:)**

Tape all visible seams, valleys, joints, large cracks & fractures prone to water intrusion on roof surface. Apply a liberal coat of PRIMER (PERMABOND™) at 12-16 mils wet film thickness, directly to the affected area using: 1- brush, 2- at least a one inch nap roller, or 3- at least a one gallon per minute piston type airless sprayer with a .021 minimum tip size. Remove all line filters and gun filters before spraying. Lay the PERMATAP™ directly onto the WET PRIMER. Tape must be put down before PRIMER has had a chance to start drying (approximately 15 minutes). After all areas are taped let dry for 1 to 2 hours. Apply a second light coat of PRIMER at 6-8 mils wet over the top of the tape. Let dry for at least 2 hours before continuing. If a full PRIMER coat (Step#: 6) is applied the second light coat of PRIMER is recommended but not required.

**STEP#6: PRIMER COAT**

Apply PRIMER (PERMABOND™) using: 1- brush, 2- at least a one inch nap roller, or 3- at least a one gallon per minute piston type airless sprayer with a .021 minimum tip size. Remove all line filters and gun filters before spraying. The PRIMER must be applied perpendicular to the width of the roof. Example: If the width of the roof runs from North to South then the coating will be applied from East to West. This will be the start of a checkerboard application pattern. See diagram below. Apply the PRIMER at a rate of 100-150 square feet per gallon covering the entire roof surface. Wet film thickness of 12-16 mils resulting in a dry film thickness of 4-7 mils. Let PRIMER dry at least 4 hours before continuing.

**STEP#7: FIRST COAT of ROOF COATING (PERMAKOTE PLUS®)**

Be sure entire surface is clean and free of all moisture. Be sure the entire area to be coated is primed with a minimum dry film thickness of 4 mils. If not, then spot prime the deficient areas until the minimum dry film thickness is achieved. Apply First Coat of Roof Coating using: 1- brush, 2- at least a one inch nap roller, or 3- at least a one gallon per minute piston type airless sprayer with a .027 minimum tip size. Remove all line filters and gun filters before spraying. The first coat must be applied perpendicular to the coat of PRIMER to continue the checkerboard pattern. See diagram below. Apply the first coat at a rate of 100-125 square feet per gallon per coat over the entire roof surface. Wet film thickness of 14-16 mils resulting in dry film thickness of 8-10 mils. Let dry at least 12 hours before continuing.

**STEP#8: SECOND COAT of ROOF COATING (PERMAKOTE PLUS® or for extra protection use PERMAKOTE SUPER PLUS®)**

Be sure entire surface is clean and free of all moisture. Be sure the entire area to be coated has a minimum dry film thickness of 12 mils (this includes 4 mils of PRIMER). If not, then spot coat the deficient areas until the minimum dry film thickness is achieved. Apply Second Coat of Roof Coating using: 1- brush, 2- at least a one inch nap roller, or 3- at least a one gallon per minute piston type airless sprayer with a .027 minimum tip size. Remove all line filters and gun filters before spraying. The second coat must be applied perpendicular to the first coat of ROOF COATING to complete the checkerboard pattern. See diagram below. Apply the second coat at a rate of 100-125 square feet per gallon per coat over the entire roof surface. Wet film thickness of 14-16 mils resulting in dry film thickness of 8-10 mils. Let dry at least 24 hours before Final Evaluation.

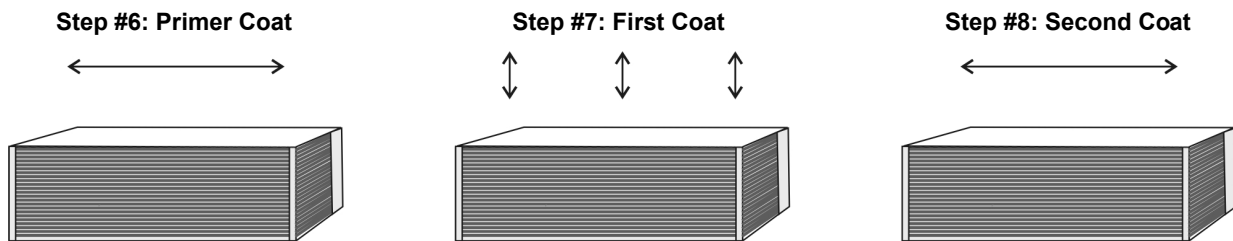
**STEP#9: FINAL EVALUATION**

At this time a detailed evaluation of the completed job will determine the quality of the workmanship and whether strict application specifications have been met. The entire roofing surface must be completely coated & sealed. Be sure to check that all roof areas are completely coated & sealed under permanently placed roof items such as roof top air conditioning units. Divide roof into 1,000 square feet sections and randomly check one spot in each section for a dry film thickness of all three coats of at least 20 mils; and at least 40 mils if PERMATAP™ was used. Remember to touch up the penetration made by the dry film thickness gauge. If specifications have not been met, recoat the entire roof or deficient areas. Repeat evaluation and recoating until the required minimum dry film thickness is achieved.

**How to Achieve**

**the Checkerboard**

**Application Pattern:**



*In Any Event Nationwide Chemical Coating Manufacturers, Inc. will not be liable or responsible for any past, present or future leaks or any resulting consequential or incidental damages.*