

POLY-TUFF SYSTEMS INTERNATIONAL

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PSI 403 Pretreatment Penetrating Polymer Barrier to Control Vapor Transmission on Concrete Floors

DESCRIPTION

PSI 403 Vapor Barrier is a 100% solid, 100% reactive, ultra low viscosity, moisture-insensitive, non-shrink, two component, modified epoxy penetrating sealer. It is formulated to penetrate the cement paste portion of the concrete and fill pores within the concrete structure. The polymer has excellent adhesion to the aggregate and cures under dry and damp conditions.

WHERE TO USE

Use on clean concrete surfaces that have vapor transmissions problems.

- Slabs-an-Grade Concrete Floors
- Interior or Exterior
- Heavy Traffic Areas
- Pretreatment before Overlaying Floors with Polymer Systems, Tile and Carpets

ADVANTAGES

- Excellent Working Time
- Cures and Adheres on Dry or Damp Concrete Surfaces
- Applicable and Curable Down to 33°F
- Creates a Dense, Non-porous Barrier within the Concrete Mass Upper Surface
- 100% Solids, No VOC's
- Ultra Low Viscosity
- Very Safe to Use
- Low Odor During Application
- Cures Without Other Chemical Aid
- USDA and FDA Compliance
- Applied with Squeegee and Roller Improves Strength Properties of Concrete

TYPICAL DATA FOR PSI 403 VAPOR BARRIER (Material and Curing Conditions at 73°F unless noted, 50% R.H.)

COLOR	Light Amber	VISCOSITY	20 - 40 cps (MPa.s)
TENSILE STRENGTH	3,100 psi (21.4 MPa)		
TENSILE ELONGATION	>10%		
WATER ABSORPTION	0.01		
TACK-FREE	6 - 12 hrs	FULL CURE	7 days
POTLIFE	12 - 18 minutes	SHELF LIFE	1.5 years

LIMITATIONS

- DO NOT APPLY ON WET OR WATER SATURATED CONCRETE SURFACES
- Do Not Apply when Substrate Temperature is below 33°F (1 °C).
- Do Not Thin with Solvents or Other Materials, They Will Prevent Proper Cure.
- Prod. No. 403 is a Pretreatment Material - It Must Be Covered with an Approved Wear Surface by PolyTuff Systems, International.

SURFACE PREPARATION

1. Sound concrete for soft areas, and delaminations.
2. Locate all cracks, leaking expansion, isolation and control joints.
3. Follow PolyTuff standard recommendations for patching, crack and delamination repairs and sealing all joints.
4. Remove all surface overlay materials.
5. Shot blast concrete surface to remove all paint, coating, adhesives, any contaminants and laitance.
6. Use fans if necessary to move air over the cleaned surface to help dry the concrete.
7. The drier the concrete the deeper the penetration of the polymer.
8. All of the above work must be completed, if required, before product application.

TYPICAL COVERAGE

It is difficult to determine exact coverage's of a penetrating product. The denser the concrete the less penetration and the higher the porosity of the cement paste the deeper the product will penetrate. Application rates vary from 35 to 70 fe / gallon (0.58 to 1.16 L / rn").

How to Apply PSI 403 Vapor Barrier

TEST SUBSTRATE FOR

CLEANNES AND ADHESION

Before placement of the Polymer Overlay test the cleaned concrete substrate for soundness and cleanliness with a Tensile Pull Test ACI 503 R (min. 200 psi) or PolyTuff Surface Shear Test. 100% concrete must fail to pass either test without bond line failure.

TEST CONCRETE FOR VAPOR TRANSMISSION

1. It is recommended that a vapor transmission test(s) be completed before accepting any project.
2. To obtain useful data the concrete must be cleaned in the same manner as it is planned for the complete project.
3. Follow the instructions in the vapor transmission testing kit.
4. Consult with a PolyTuff trained Technician for advice on solving vapor transmission problems and selecting the overlay system.

PRECONDITIONING POLYMER

When temperatures drop, polymers typically thicken and it becomes harder to flow or to spread the product. When the temperatures are warmer, they typically become thinner. To improve the product flow-ability maintains temperature at about 20 °C (73 °F) before mixing. When the substrate temperature is 10 °C (50 °F) or lower, preheat each epoxy component to 60 °F before mixing. Caution the potlife will be reduced by about 50%.

CUSTOMER SATISFACTION

Apply to a test area(s) to ensure that the application meets PolyTuff Standard for this project and the customer's expectations.

MIXING

Pre-mix Component "A", then pour Component "B" into "A" and mix for 60 seconds (until one even colors develops) with a low speed paddle attached to a drill (400-600 rpm). The mixed product is ready for immediate placement.

APPLICATION METHODS

1. Pour the mixed polymer onto the floor and spread evenly over the surface leaving a thick layer of epoxy with a squeegee.
2. Back roll the wet polymer into the surface of the concrete with a 3/8 in. nap roller. Help work the material into the concrete by pressing down onto the roller with extra pressure.
3. Leave a wet film of epoxy on the surface of the concrete after rolling.
4. Inspect all areas repeatedly to see if the concrete has absorbed the epoxy into the concrete mass. If it has immediately apply more material as explained above. Repeat as many times as necessary.
5. Do Not Broadcast With Aggregate or Any Other Material. This is a Neat Application.

CURING

1. Allow the epoxy to gel and cure over night.
2. Carefully inspect the entire area to make sure that the vapor barrier film is solid without film break or concrete surface protrusions.
3. If protrusion(s) occur reapply the PSI 403 Vapor Barrier to solve the problem(s).
4. Allow epoxy to become tackfree, and immediately apply the polymer overlay system selected to protect the floor.

CAUTION

Component "A"- Irritant
Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid contact with eyes.

Component "B" - Corrosive
Contains aliphaticcycloaliphatic amines. Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer

IMPORTANT INFORMATION Use of safety goggles, chemical-resistant gloves, adequate ventilation and NIOSH/MSHA approved respirator is recommended.

CLEAN UP

In case of spills wear suitable protective equipment, contain spill, and collect with absorbent material, place in suitable container. Ventilate area. Avoid contact. Dispose according to applicable local, state, and federal regulations.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. For respiratory problems, remove person to fresh air. Contact Physician Immediately. Wash clothing before re-use.

Consult Material Safety Data Sheet for More Information

FOR INDUSTRIAL USE ONLY

KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINERS TIGHTLY CLOSED