

# PERMASHIELD® 100



1-Part, Water Base Acrylic/Polyurethane

MADE IN U.S.A.

## PRODUCT DESCRIPTION:

PERMASHIELD 100 is a one-component, water-based, cross-linked acrylic/urethane coating. It exhibits outstanding resistance to harsh environmental conditions, and has exceptional film hardness. PERMASHIELD 100 is elastomeric and displays superior resistance to impacts, abrasion, corrosion, UV exposure, hot tire pick-up and household stains and chemicals.

### BASIC USES:

PERMASHIELD 100 can be used for interior or exterior, horizontal or vertical, painted or unpainted applications. PERMASHIELD 100 is an excellent choice for products where odor for the finished system is a concern. It can be used on various surfaces such as concrete, masonry, wood, prepared metal, etc.

### FEATURES:

- Universally Compliant
- Anti-Microbial
- USDA Acceptable
- Available in Clear, Semi-Gloss & Low-Gloss
- Available in Colors, Semi-Gloss, Low-Gloss & Eggshell
- Superior Block Resistance and Film Hardness
- Outstanding Resistance to Dirt Pick-up, Staining & Scrubbing
- Excellent Scrub Resistance and Adhesion
- Resistant to Chemicals including Chlorine
- Hot Tire and UV Resistant

\*Antimicrobial properties built in to protect Permashield 100 provide mold and mildew-resistance to the dried film.

\*Permashield 100 conforms to the USDA-FSIS regulatory sanitation performance standards for coatings in contact with food establishment facilities.

Product Qualifications	
Cal Green	Yes
OTC (Industrial Maintenance)	Yes
SCAQMD (Industrial Maintenance)	Yes
CARB (Industrial Maintenance)	Yes
LEED (New Construction)	Yes
LEED (New Schools / CHPS)	Yes

### PACKAGING:

PERMASHIELD 100 is one-component and packaged in a Clear/ Neutral base or white base. It may be tinted with universal colorants to match any color.

#### Clear/ Neutral Base - Short-Fill: 8 Ounces per gallon

- ITEM NO. 5450 Semi-Gloss
- ITEM NO. 5460 Low-Gloss

#### White Base - Short-Fill: 2 Ounces per gallon

- ITEM NO. 5455 Semi-Gloss
- ITEM NO. 5445 Low-Gloss
- ITEM NO. 5430 Eggshell

### TECHNICAL DATA:

Solids by Weight (ASTM D2369) White Base	.....43±2%
Solids by Weight (ASTM D2369) Clear/ Neutral	.....30±2%
Solids by Volume (ASTM D2697) White Base	.....34%
Solids by Volume (ASTM D2697) Clear/ Neutral	.....31%
VOC Level (ASTM D2369-81)	.....<50 g/L
Flash Point (ASTM D1310-82)	.....None, Water Base
Weight per gallon (ASTM D1475-60)	.....8 - 10 Lbs
Viscosity (ASTM D2393-80)	.....100 KUs
Finish	.....Semi-Gloss: 47-53°, Low-Gloss: 25-35°
<i>[Based on MPI Gloss Levels @60°]</i>	

Tensile Strength (ASTM D412)	.....3800 psi
Modulus @100% Elongation	.....2200 psi
Hardness, Pencil (ASTM D3363) Scratch/Gouge	.....F/3H
Scrub Resistance (ASTM D2486)	.....2,000 + cycles
Recoat	.....1-2 Hours
Dry Time @70°F-80°F	.....30 Minutes
Moisture Vapor	.....Excellent
Outdoor Weathering Gloss Retention (ASTM D4587)	.....92%
<i>[QUV Type A Blub, 500 hours]</i>	

### PREPARATION:

Surface preparation is critical to product performance. The surface must be dry and clean, free from all adhesion affecting contaminants like dirt, dust, oil, grease, wax, loose materials, etc.

### PRIMERS:

PERMASHIELD 100 is self-priming when applied directly over unsealed porous surfaces (180 grit surface texture), however if a primer is needed, we recommend the use of:

**AQUAPRIME:** Multi-surface PVA primer including surfaces with a pH over 13.

**MONOCHEM 21:** "Stick to anything" primer. For oil/solvent/alkyd/water base painted surfaces or unpainted, dense, non-porous substrates (glazes, marble, etc.).

**ULTRA-PRIME:** For latex base painted surfaces.

### PREVIOUSLY PAINTED CONCRETE SURFACES:

#### ACRYLIC PAINT:

Remove all loose, peeling or poorly bonded paint. Surfaces must be mechanically cleaned and abraded, using 60-80 grit sandpaper. Dull glossy surfaces by sanding or using a chemical deglosser. Then clean the surface by scrub washing with a solution of ½ cup TSP to one gallon of warm water. Pay special attention to areas where build-ups of dirt, grease and oil exist. These areas should be scrubbed clean.

#### OIL BASED PAINT:

Over non-porous or oil based painted surfaces, MONOCHEM 21 Epoxy Primer is required. MONOCHEM 21 primer has excellent adhesion when applied over oil base, solvent base, and water base coatings. A test patch to a clean contaminant free coating is required to ensure the proper adhesion and performance. If MONOCHEM 21 isn't used, then remove all chlorinated rubber and solvent based finishes such as oil based

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TRAFFIC COATINGS 09670  
PROTECTIVE COATINGS

MONOPOLE INC.  
UPDATED JANUARY 2018



MONOPOLE INC.  
Manufacturer of  
U.S. SPECIALTY COATINGS

4661 Alger Street • Los Angeles, CA 90039

Tel: 818-500-8585 • Fax: 818-502-0818

www.monopoleinc.com • Email: info@monopoleinc.com

enamels, epoxies, urethanes, etc. by sandblasting, sanding or bead blasting prior to product application.

#### **UNPAINTED CONCRETE SURFACES:**

Concrete surfaces to receive **PERMASHIELD 100** must be porous, structurally sound, cured for a minimum of four weeks, dry for 48 hours (< 15% moisture), free from rock pockets, voids, cracks, etc. (larger than 1/16"). Dense, non-porous concrete should be primed with **MONOCHEM 21** or sandblasted, shot blasted, or acid etched (to create 180 grit surface profile) for proper penetration and adhesion.

#### **UNPAINTED METAL SURFACES:**

All rust and contaminants must be removed by lightly blasting with fine abrasives or by conducting a light etching with **MONOCHEM METAL ETCH**. To minimize rust formation in areas where rust has previously formed, we require applying a rust inhibitive metal primer within 3-6 hours after preparing the surface.

#### **METAL SURFACES:**

Non Ferrous (galvanized, aluminum, stainless steel): Remove all oils or films with a neutral detergent or emulsion cleaner. Blast lightly with fine abrasives or conduct a light etching. Then rinse using a Zinc treatment and apply **PERMASHIELD 100** within 3-6 hours to avoid oxidation.

Corrosive Metals: Remove all the adhesion affecting rust, dirt, grease and other contaminants by one of the following depending on the degree of cleanliness required: Blast SSPC-SP3; SSPC-SP2; SSPC-SP6; SSPC-SP7. Blasting lightly with fine abrasives or conducting a light etching are also options. Then prime with a rust inhibitive primer within 3-6 hours.

#### **WOOD SURFACES:**

Sand wood to a rough finish to provide "tooth" for the coating. We require sealing all weather exposed sides of the wood to prevent moisture penetration into the wood and hydrostatic pressure. The moisture content of the wood must be 13% or lower.

Some woods, such as redwood, pine, and cedar contain tannin acid. **PERMASHIELD 100** will not stop tannin acid or bleeding from wood. We require using a water-based premium grade stain blocker/primer before applying **PERMASHIELD 100** for these specific applications.

Contact Monopole, Inc. Technical Department for elevated wood deck applications to see if a membrane (EX: System 330) is needed.

#### **APPLICATION AND COVERAGE:**

**PERMASHIELD 100** can be applied by roller, brush or airless sprayer. Recommended Tip Size: 513. The coverage varies depending on the texture and condition of the substrate. Apply at an approximate rate of 250-350 sq. ft. per gallon to yield 2 to 3-dry mils of thickness. Surface and air temperatures must be between 50°F and 90°F during application.

#### **DRY TIMES:**

- Recoat: 1-2 Hours between coats  
A second coat is always recommended for increased durability and proper hide.
- Light Foot Traffic: 4-5 Hours
- Full Foot Traffic: 24 Hours
- Heavy Objects & Hot Tire Exposure: 4-5 Days

ALWAYS apply a test patch to check for adhesion,

compatibility and proper results. Responsibility for determining the adhesion and performance of **PERMASHIELD 100** to an existing finish rests with the applicator.

#### **•WHEN NOT TO USE PERMASHIELD 100:**

- Do not apply over poorly-bonded previous paint.
- Do not apply if moisture in the substrate is higher than 15%.
- Do not apply to a poorly cured or dusty concrete.
- Do not apply to a surface exhibiting hydrostatic pressure.
- Do not apply if surface temperature is over 90°F or below 50°F.
- Do not apply during windy conditions or if rain is eminent within 24 hours.
- Do not apply to surfaces with a pH over 9.

#### **CLEAN UP:**

Clean all tools and equipment immediately after use with soap and water.

**WARRANTY INFORMATION:** MONOPOLE believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products. It is your responsibility to thoroughly test the product in your specific application to determine its safety and performance capabilities. Since use of this product is beyond our control, MONOPOLE, INC. cannot assume any risk or liability for results obtained when not used according to our specifications and directions. Unless MONOPOLE provides a specifically written statement of fitness for a particular use, MONOPOLE'S sole warranty is that the product will meet its current sales specifications. MONOPOLE disclaims any other expressed or implied warranties, including the warranty of merchantability and fitness for use. Your exclusive remedy and MONOPOLE'S sole liability for breach of warranty is limited to a refund of the purchase price or replacement of any product proven to be defective. In no event shall the seller be liable for any loss of profits or other consequential damages, including labor charges.