PERMASHIELD 100 is a one-component, water-based, ZERO VOC, ZERO HAP, NANO-PARTICLE, cross-linked acrylic/urethane coating. PERMASHIELD 100 exhibits outstanding resistance to harsh environmental conditions, and has exceptional film hardness and superior resistance to impacts, abrasions, corrosion and UV exposure.

BASIC USES:
PERMASHIELD 100 can be used for interior or exterior, horizontal or vertical, painted or unpainted applications. Due to its ammonia free composition, 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 and metal.

PERMASHIELD 100 has a proven tolerance to expand and contract, providing a flexible coating. It forms an elastomeric monolithic surface resulting in a very low coefficient of friction. It is USDA-approved for use in food handling equipment and processes.

FEATURES:
ZERO VOC and ZERO HAP
Interior/Exterior, Vertical/Horizontal Application
Available in Clear, Semi-Gloss, Low-Gloss
Available in Colors, Semi-Gloss, Low-Gloss & Eggshell
Superior Block Resistance and Film Hardness
Outstanding Dirt Pick-up Resistance
Excellent Scrub Resistance
Excellent Wet Adhesion
Excellent Gloss and Adhesion

TECHNICAL DATA:
Solids by Weight (ASTM D2369) Clear .................................................. 40±2%
Solids by Volume (ASTM D2697) Clear .................................................. 31%
Solids by Weight (ASTM D2369) Color .................................................. 48±2%
Solids by Volume (ASTM D2697) Color .................................................. 37%
VOC Level (ASTM D2369-81) Clear .................................................. Zero
Flash Point (ASTMD1310-82) Clear .................................................. None, Water Base
Weight per gallon (ASTM D1475-80) .................................................. 9.09 lbs
Viscosity (ASTM D2393-80) .................................................. 80-85 KUs
Tensile Strength (ASTM D412-80) .................................................. 3800 psi
Abrasion Resistance (ASTM D3389-80) .................................................. 12 mgloss
Hardness, Pencil (ASTM D3363) .................................................. F/3H
Elongation @77°F (ASTM D2240) .................................................. 2200 psi
Modulus @100% Elongation .................................................. 1,000+ psi
Scrub Resistance (ASTM D2486) .................................................. 10,000+
Recoat .................................................. 2 Hours
Chemical Resistance such as: Acids, Urine, Salts, Oils, Grease and mild solvents
Recoat .................................................. Excellent
Outdoor Weathering Resistance .................................................. Excellent
U-V Resistance .................................................. Excellent

PREVIOUSLY PAINTED CONCRETE SURFACES:
LATEX BASED 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. 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 require to ensure the proper adhesion. If MONOCHEM 21 isn’t used, then remove all chlorinated rubber and solvent based finishes such as oil based enamels, epoxy, urethane, 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 and cracks. 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.

METAL SURFACES:
Non-Ferrous. GALVANIZE AND ALUMINUM: Remove oils or films with a neutral detergent or emulsion cleaner. Blast lightly with fine abrasive or conduct light etching using METAL ETCH.
Then rinse using a Zinc treatment. Priming with MONOCHEM 21 will maximize adhesion but is not required.

Ferrous STEEL: Remove all loose rust, dirt, grease or other contaminants by one of the following depending on the required degree of cleanliness. Blast SSPC-SP3; SSPC-SP2; SSPC-SP6; SSPC-SP7. Blast lightly with fine abrasives or conduct a light etching using METAL ETCH. Then rinse using a Zinc treatment and apply a rust inhibitive primer.

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. The moisture content of the wood must be 13% or lower.

Wood decks, tongue and groove designs, or dimensional lumber built with gaps between planks may allow water to penetrate behind the coating creating hydrostatic pressure if the gaps are not taped or caulked with a paintable urethane caulk.

Elevated decks require a membrane and additional preparation. Contact Monopole customer service for more information.

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.

APPLICATION AND COVERAGE:
PERMASHIELD 100 can be applied by roller, brush or airless sprayer. The coverage varies depending on texture and condition of the substrate. Apply at the rate of approx. 200-250 sq. ft. per gallon to yield a 2 to 3-dry mil thickness. Surface and air temperature must be between 50°F and 90°F.

Apply the first coat and allow to dry for 1 to 2-hours. A second coat is recommended for increased durability and proper hide. The full cure takes 36-hours.

ALWAYS apply a test patch to check for adhesion, compatibility and proper results. Responsibility for determining the adhesion 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 92°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 high pH.

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

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

Clear Base - Short-Fill: 8 Ounces per gallon
ITEM NO. 5450 Clear Base, Semi-Gloss
ITEM NO. 5460 Clear Base, Low-Gloss

White Base - Short-Fill: 6 Ounces per gallon
ITEM NO. 5455 White Base, Semi-Gloss
ITEM NO. 5445 White Base, Low-Gloss
ITEM NO. 5430 White Base, Eggshell

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.