

# PERMASHIELD 2000®



Fast Cure 100% Solids Polyurea Top Coat



MADE IN U.S.A.

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HIGH PERFORMANCE COATING 09960  
PROTECTIVE COATINGS

MONOPOLE INC.  
UPDATED FEBRUARY 2017

## PRODUCT DESCRIPTION:

ITEM NO. 1400

**PERMASHIELD 2000** is a two-component, 100% solids, liquid applied Aliphatic Polyurea topcoat. It is specially formulated for a quick curing same day return to service application.

**PERMASHIELD 2000** may be used as a topcoat over acrylic, polyurethane, and epoxy applications. **PERMASHIELD 2000** can be applied over painted or unpainted concrete, wood, prepared metals and plastic. It is also ideal for:

- Industrial Warehouses
- Garage Floors
- Parking Structures
- Museums
- Commercial Plants
- Food Processing Facilities
- Off-Shore Oil Plants
- Pipeline Barges
- Pulp & Paper Mills
- Convention Centers/Stadiums

### ADVANTAGES:

- Quick Cure
- Excellent Weatherability
- Zero VOC
- Hot Tire Resistant
- Zero HAPs
- UV Resistant
- Approved for USDA Inspected Facilities
- Chemical Resistant
- Extremely Durable
- Abrasion Resistant
- Seamless Waterproofing
- High Gloss
- Clear or Colors

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

**PERMASHIELD 2000** qualifies for earning LEED® credits for Environmental Quality, EQ 4.2 Low-Emitting Materials, based on low contribution of VOC.

### MPI APPROVED PRODUCT:

MPI #83 Polyurethane Deck Coating (Slip-Resistant)

### APPLICATION:

**PERMASHIELD 2000** can be applied by using phenolic resin core rollers, short nap rollers or a squeegee. Extra care should be taken not to cause air bubbles. Apply at an approximate coverage rate of 200-250 sq. ft. per gallon to yield a minimum thickness 6 dry mils per coat. It should be noted that the heavier the application, the longer the curing process.

Apply one coat of **MONOCHEM 21** primer if there are adhesion issues to the sound surface during the test patch.

### TECHNICAL DATA:

Solids by Weight (ASTM D-2369)	100%
Solids by Volume (ASTM D-2697)	100%
Colors	Clear, Standard Colors
Mixing Ratio	2:1
Dry film Thickness @1 gallon/100 sq/ft/per coat	16 mils
Dry film Thickness @1 gallon/250 sq/ft/per coat	6-7 mils
Pot Life @75 °F (24 °C), 50% R.H.	10-15 minutes
VOC (USEPA Method 24)	< 10 g/L
Compressive Strength/Hardness (ASTM D-2240) after 1 week	> 5000 psi
	> 70 Shore D
Tear Resistance, Die C, (ASTM D-624) Color & Clear	375 & 400 ±50 PLI
Impact Resistance, Inches/Lbs-	
Direct/Reverse	> 160
Persoz Hardness of	> 175
Adhesion to Concrete (ASTM D-7234)	Cohesive Concrete Failure
Tensile Strength (ASTM D-412) Color & Clear	2600 & 3000 ±200 PSI
	18 & 21 ±2 MPa
Taber Abrasion (mg loss) 1000 cycles, Cs17 Wheel	40
Elongation (ASTM D-412)	40 ± 10%
Viscosity @75 °F (24 °C.), (ASTM D-2196) Part A	92 ku (1240 mPa s)
Viscosity @75 °F (24 °C.), (ASTM D-2196) Side B	113 ku (2466 mPa s)

### PRECAUTIONS:

- The surface moisture content must be less than 15%.
- Apply when the surface temperature is between 32°F and 130°F.
- Do not apply in windy conditions or if rain is expected within 24 hours.
- Do not dilute; use as-is.
- Do not apply to surfaces displaying hydrostatic pressure.
- Do not apply to surfaces with a pH over 8.
- For pigmented applications, mix Part A individually for 5 minutes to ensure color consistency. Then without delay mix with Part B and apply immediately.

### MIXING:

**PERMASHIELD 2000** may not be diluted under any circumstance. Mix Part A individually for 5 minutes before combining with Part B. Add Part B to Part A while mixing, using a mechanical mixer (Jiffy Mixer) at low to medium speeds. Mix for 2-3 minutes until a homogeneous mixture and color is obtained.

Mix frequently during the application to maintain a uniform color. Mix only enough (Part A & B) that can be applied in 5 minute increments because **PERMASHIELD 2000** has a 10-15 minute pot life. Use care to scrape the sides of the container to ensure that an exact 2:1 ratio has been mixed together. Do not whip too much air into the material as this may result in pinhole blisters or shortened pot life.



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**CURING TIME:**

At approximately 70°F (21°C) and 50% relative humidity allow 2 hours drying time between each coat. If applying a thicker than normal application, allow 2-4 hours between coats. Do not recoat the PERMASHIELD 2000 until it is dry to the touch.

**DRY TIMES:**

Recoat (standard coat): 2 hours (do not exceed 24 hours)

Foot Traffic: 5-6 Hours

Vehicular Traffic: 20-24 Hours

**CAUTION:**

Uncured **PERMASHIELD 2000** is very sensitive to heat and moisture. Higher temperatures or humidity will accelerate the cure time, while lower temperatures or humidity will extend the cure time. Use caution in batch sizes and application thickness.

**LIMITATIONS:**

The **PERMASHIELD 2000** mixture will thicken as it approaches its 10-15 minute pot life. Mix only an amount of material that can be used within five minutes. Containers that have been opened must be used as soon as possible. Do not recoat until the **PERMASHIELD 2000** is dry to the touch.

**STORAGE & PACKAGING:**

**PERMASHIELD 2000** is packaged in 96 ounce kits or 3 gallon kits. It has a six-month shelf life from the manufactured date in the original factory sealed containers.

1400-96OZ: Permashield 2000 (96 Oz. Kit)

2 Quarts Part A & 1 Quart Part B

1400-03: Permashield 2000 (3 Gallon Kit)

2 Gallons Part A & 1 Gallon Part B

**SAFETY INFORMATION:**

Monopole Inc. strongly recommends the use of aggregates, for skid resistance, in all of its floor coatings that may be exposed to wet, oily, or greasy conditions. The type of activity on the floor surface may determine the degree of slip resistance required for a specific area. Monopole Inc. will not be responsible for injury caused in a slip or fall situation. It is the end users responsibility to determine the suitability and safety of our coatings for their particular application.

**EQUIPMENT CLEAN-UP:**

Use an environmentally safe and locally compliant solvent immediately after use.

**SHELF LIFE:**

**PERMASHIELD PREMIUM** has a one year shelf life in its original unopened container. Storage temperatures must be between 50°F and 90°F.

**FIRST AID:** IMPORTANT - Read the entire SDS before applying this product.

**Industrial Hygiene/Ventilation Measures:** Good industrial hygiene practice dictates that worker protection should be achieved through engineering controls, such as ventilation, whenever feasible. When such controls are not feasible to achieve full protection, the use of respirators and other personal protective equipment is mandated. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

**Respiratory Protection:** A respirator that is recommended or approved for use in isocyanate-containing environments (air-purifying or fresh air-supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures. A supplied-air respirator (either positive pressure or continuous flow-type) is recommended.

**Hand Protection:** Gloves should be worn. Nitrile rubber gloves, Butyl rubber gloves, Neoprene gloves.

**Eye Protection:** When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle, or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

**Skin And Body Protection:** Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Gloves, long sleeved shirts and pants.

**Additional Protective Measures:** Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

**WARNING:** **PERMASHIELD 2000** contains Isocyanates. **DO NOT DILUTE UNDER ANY CIRCUMSTANCE.**

**WARRANTY INFORMATION:** All the recommended products will mirror the performance and soundness of the structure, previous coatings and filling/patching (repair) materials. For an ideal application, we recommend removing the existing coatings. If this is not an option, remove all unsound, loose and/or poorly adhering paint and conduct thorough test patches. Delamination or the failure of the existing/non Monopole coatings is not covered by any performance warranty. MONOPOLE believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products. But it is the end users responsibility to thoroughly test the product in the specific application to determine its performance efficacy and safety. 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 specific written statement of fitness for a particular use, MONOPOLE'S sole warranty is that the product will meet its current sales specifications. MONOPOLE specifically disclaims any other expressed or implied warranty, including the warranty of merchantability and fitness for use. The exclusive remedy and MONOPOLE's sole liability for breach of warranty is limited to a refund of the purchase price or replacement of product proven to be defective. In no event shall the seller be liable for any loss of profits or other consequential damages. Under no circumstance will MONOPOLE pay labor charges.