

PERMASHIELD® DTM



ACRYLIC-URETHANE COATING



MADE IN U.S.A.

PRODUCT DESCRIPTION:

ITEM NO. 6900, 6950

PERMASHIELD DTM is a user friendly, water base *direct-to-metal* coating for moderate industrial use. It is a one-component environmentally friendly cross-linked acrylic/urethane with exception film hardness. **Permashield DTM** exhibits outstanding resistance to corrosion, harsh environmental conditions, impacts, abrasions, humidity and UV exposure. It dries to a semi-gloss finish and can be tinted to any color.

PERMASHIELD DTM is great for indoor or outdoor applications. It can be used directly on coated ferrous and non-ferrous surfaces like aluminum, galvanized steel and Iron. **PERMASHIELD DTM** has superior adhesion can be used for interior or exterior, horizontal or vertical, painted or unpainted applications. Due to its ammonia free composition, it is an excellent choice for jobs where odor is a concern.

FEATURES:

- Low VOC and ZERO HAPs
- Flash Rust Inhibitive
- Interior / Exterior Application
- Available in Clear, Semi-Gloss, & Low-Gloss
- Available in colors, Semi-Gloss, Low-Gloss & Eggshell
- Direct to Metal (DTM) Self-Priming
- Superior Block Resistance and Film Hardness
- Outstanding Dirt Pick-up Resistance
- Excellent Scrub Resistance
- Excellent Gloss and Adhesion
- Chemical and Corrosion Resistance
- Meets USDA Criteria

BASIC USES:

- Structural Steel
- Mechanical Machinery
- Fencing
- Power Plants
- Piping
- Storage Facilities
- Processing Equipments
- Cold Storage Facilities
- Food Processing Plants

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

PREPARATION:

Surface preparation is critical to product performance.

- The surface to be coated must be dry, clean, and free from all adhesion affecting contaminants like rust, stains, dirt, dust, oils, greases, waxes, solvents, loose materials, etc.
- Remove any loose paints and old coatings with marginal adhesion.
- All repairs necessary should be done before the application.

TECHNICAL DATA:

Solids by Weight, Clear Base (ASTM D2369)	34 ± 2%
Solids by Weight, White Base (ASTM D2369)	46% ± 2%
Solids By Volume, Clear Base (ASTM D2697)	35%
Solids By Volume, White Base (ASTM D2697)	44%
Viscosity	100-110 Kus
VOC Level	< 100 g/L
Weight	8 -9 Lbs/gallon

pH	7-8
Flash Point	None, Water Base
Finish@60°	Gloss (White Base: 80°, Clear Base: 90°)

FILM PROPERTIES:

Cross Hatch Adhesion (ASTM D3359)	
CRS	5B
Galvanized	5B
Aluminum	5B

Abrasion Resistance (ASTM D3389) C-402 Tabor Abrasion, w/1000gm, CS-17 wheel, 1000 cycles	12 mg loss
Hardness, Pencil (ASTM D3363) Scratch/Gouge	F/3H
Impact Resistance (ASTM D2794, 250 Lbs)	Pass
Flexibility (ASTM D522, 180° on ½" Madrel)	Pass
Accelerated Weathering (ASTM D4587)	Gloss Retention: 100%
Salt Spray Resistance (ASTM B117), CRS, 30 Day Cure	700 Hrs @3 DFT

Rusting (ASTM D610)	10 (none)
Blistering (ASTM D714)	10 (none)
Corrosion (ASTM D1654)	10 (none)
Number of blisters	None
Early Water Resistance (ASTM D714)	No blisters
Outdoor Weathering Resistance (1 Year)	No blisters, No rust, scribe rust very few
U-V Resistance	Excellent

RECOMMENDED PRIMERS:

Permashield DTM is self-priming when applied directly over unsealed, clean and porous surfaces (180 grit surface texture), prepared metals and acrylic coated surfaces.

- **Monobond RI:** Ideal for coating ferrous/non-ferrous metals
- **Monochem 21:** Maximum adhesion for topcoating oil/solvent/alkyd/unknown base coatings. May sag on vertical applications.

Previously Painted Surfaces:

Acrylic/latex 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 by using a chemical deglosser. Clean surfaces 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: Apply one coat of **MONOCHEM 21** Epoxy Primer. For more information, follow the product data sheet or contact our technical service department. Removing all existing oil based

9

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PROTECTIVE COATINGS

MONOPOLE INC.
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coatings by sandblasting, shot blasting, or bead blasting is another option. This includes all chlorinated rubber and solvent based finishes such as oil based enamels, epoxies, urethanes, etc.

Non-Ferrous Metals (galvanized, aluminum, stainless steel): Remove all oils or films with a neutral detergent or emulsion cleaner per SSPC-SP1. Blast lightly with fine abrasives or conduct a light etching. Then rinse the surface with zinc and coat within 3 hours to avoid oxidation.

Ferrous Metals: Remove all the loose rust, dirt, grease or other contaminants following SSPC-SP1. Then depending on the degree of cleanliness required, blast the surface with SSPC-SP3; SSPC-SP2; SSPC-SP6; SSPC-SP7. Blast lightly with fine abrasives or conduct a light etching. Then rinse the surface with zinc and apply **PERMASHIELD DTM** within 3 hours.

APPLICATION: (Mix well before using)

- Apply **PERMASHIELD DTM** with a brush, roller or airless sprayer.
- Brush: Polyester synthetic or natural bristle.
- Roller: Short nap 3/8" synthetic cover for smooth surfaces. Long nap synthetic cover for rough surfaces.
- Spray: Conventional Spray: Binks or equal.
- Airless Spray: Graco or equal. Pump ratio 30:1 or higher, 206-718 gun with a fluid tip of 0.13-0.017 or larger orifice. The fluid pressure should be approximately 2000-3000 psi.
- Apply two coats of **PERMASHIELD DTM** to ensure a sealed and uniform finish.

COVERAGE RATE:

Recommended Dry Mils: 2.5 - 4

Recommended Wet Mils: 7-10

Coverage: 150-250 Sq. Ft per Gallon

Dry Time @70°F.

- To touch: 30 minutes
- To recoat: 2-3 hour

WHEN NOT TO USE PERMASHIELD DTM

- Do not apply to surfaces with rust. A rust encapsulating primer is required.
- Do not apply over poorly bonded paint.
- Do not apply in windy conditions or if rain is expected within 8 hours.
- Do not apply to a surface exhibiting hydrostatic pressure.
- Do not apply if surface temperature is over 90°F. or below 55°F
- Do not apply if surface pH level is above 9.

CAUTION:

- Use with adequate ventilation.
- Keep from freezing.
- Keep out of reach of children.

TINTING:

PERMASHIELD DTM is packaged in both clear and white bases and can be tinted to any color using universal colorants. Up-to 12 ounces of colorant can be added to the clear base and up-to 6 ounces of colorant can be added to the white base.

NOTE: ALWAYS apply a test patch to check for adhesion, compatibility and proper results. Responsibility for determining the adhesion of **PERMASHIELD DTM** to an existing finish rests with the applicator. Do not apply **PERMASHIELD DTM** over poorly adhering paints.

CLEAN UP:

Clean equipment immediately after use (while still wet) with

soap and water.

PACKAGING:

PERMASHIELD DTM is packaged in one-gallon cans and 5-gallon pails.

ITEM NO. 6900: PERMASHIELD DTM CLEAR BASE

**SHORT-FILL:* 12 ounces per gallon

ITEM NO. 6950 PERMASHIELD DTM WHITE BASE

**SHORT-FILL:* 6 ounces per gallon

SHELF LIFE:

PERMASHIELD DTM will remain usable for two years from the manufactured date in its original unopened container stored at room temperature.

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.