PERMASHIELD 200
2K POLYURETHANE

PERMASHIELD 200 – 2K POLYURETHANE is a high performance, aliphatic polyurethane designed for use on interior and exterior, vertical and horizontal surfaces. It provides outstanding film hardness, durability, weathering resistance, and chemical resistance to meet the needs of high use, high traffic areas. The advanced, waterborne formula has a low odor to minimize down time in occupied spaces.

FEATURES:

Extremely Durable
Abrasion Resistant
Chemical Resistant
Hot Tire Resistant
UV & Weather Resistant
Low Odor & VOC
USDA Compliant

BUILT FOR:

Interior & Exterior
Concrete & Masonry
Wood & Composite
Drywall
Prepared Metal
Tile, Porcelain, & Fiberglass

BEST ON:

Floors & Walkways
Pool Decks
Garages & Driveways
Commercial Buildings
Industrial Facilities
Tubs, Tile, & Countertops
Animal Kennels

MEETS VOC REQUIREMENTS:

CAL Green	YES
SCAQMD	YES
CARB	YES
National AIM	YES
Green Seal GS-11	YES
LEED v4 v5	YES

SPECIFICATIONS:

Composition:	Waterborne Polyurethane
VOC (ASTM D6886)**:**	< 10 g/L
Solids by Weight:	59% ± 2 White 54% ± 2 Neutral & Clear
Solids by Volume:	55% ± 2 White 51% ± 2 Neutral & Clear
Shelf Life:	12 Months Matte 18 Months Gloss

AVAILABLE PRODUCTS:

MFG Codes:	5365 White Matte 5375 Neutral Matte 5355 Clear Matte 5360 White Gloss 5370 Neutral Gloss 5350 Clear Gloss
Tint Capacity: *Waterborne Colorants*	White – 2-6 oz / Gallon Kit Neutral – 8-12 oz / Gallon Kit Clear – Do Not Tint
Sizes:	Gallon Kit
Component Ratio:	2.5:1 (Part A : Part B)

PREPARATION:

All surfaces must be cured, firm and dry. Use suitable cleaning methods to remove all dirt, efflorescence, oil, rust, or other contamination. Mechanically grind or sand smooth, glossy, dense, or glazed surfaces to create a profile and remove dust (See **WARNING!**)

APPLICATION:

Brush:	Synthetic Bristle
Roll:	Synthetic Nap - 1/4" – 3/8"
Spray:	2000 PSI; 0.009" - 0.013" Tip

Temperature:	40°F - 90°F Air, Surface, & Material
Film Thickness:	3-5 Wet Mils; 1.5-2.5 Dry Mils
Coverage:	300-400 Sq. Ft. / Gal
Pot Life: @75°F; 50% R.H.	2 Hours Maximum
Drying Time: @75°F; 50% R.H.	4-6 Hours – Recoat ***Do not exceed 12 hours, may still be tacky* 24-48 Hours – Light Use 7 Days – Full Return to Service
Thinning:	Up to 5% Water
Clean Up:	Water

Primer – 1 Coat:

Monobond High Adhesion Primer or Monochem 2K Epoxy
Ferrous Metal – Monobond RI Direct-To-Metal Primer

Topcoat – 2 Coats:

Permashield 200 – 2K Polyurethane

Mix:

Mix Part A 3-5 minutes with a paint stick or low speed drill.
Intermix Part A and Part B. Mix together for 3-5 minutes.
Scrape sides and bottom of each can to ensure all material is intermixed.

All Surfaces:

Apply material working in small areas. Maintain a wet edge and do not work back into areas that have started to dry. Do not over apply or over work the material. Apply all material within 2 hours of mixing.

If the recoat window is missed, prime the surface before repainting.

***Accelerator additive available to speed dry & cure times. See below.*

Application Guidance: Information provided is a general guide based on standard substrates and conditions. Jobsite conditions, environment, and application methods may affect product performance. Always perform a test sample before full application to confirm suitability. If results do not meet project requirements, contact a Monopole representative before proceeding.

See following pages for detailed preparation and application instructions.

PREPARATION & APPLICATION:

BEFORE APPLICATION

GENERAL PREPARATION: All surfaces must be cured, firm, dry and cleaned free of dust, dirt, oil, grease, wax, chalk, rust, mildew or any other contamination or condition that would adversely affect the performance of the coating. Mechanically grind or sand glossy, dense or glazed surfaces (see **WARNING!**). Protect all surrounding areas - shrubbery, plants, grass, glass, metal, glazed surfaces, etc.

REPAIRS: Complete any required structural or substrate repairs prior to application and allow repair materials to fully cure. Ensure horizontal surfaces have positive drainage or slope (minimum 1/4″ per foot) to eliminate ponding water.

PATCHING & CAULKING: Fill and seal any voids, seams, holes, or cracks greater than 1/16″ using an appropriate paintable patching material and allow to fully cure. Spot priming patched areas is recommended. Coating over flexible patch or caulking or in areas with substrate movement may cause the topcoat to crack.

MOISTURE: Ensure roofs, windows, doors, and all penetrations are properly installed, sealed, and caulked to prevent moisture intrusion. All surfaces must be dry before application. Properly seal all sides of the surface to keep moisture out. Moisture intrusion behind the coating may cause blistering or peeling.

CONCRETE & MASONRY: All surfaces must be thoroughly cured and have an adequate profile. Curing compounds, non-recoatable sealers, and densifiers must be removed or properly primed.
Moisture content must be < 15% and pH < 8. Calcium chloride testing moisture testing is recommended per ASTM F1869.

WOOD: All surfaces must be unsealed and porous or properly primed. Moisture content must be < 13%. Allow tannin-rich wood to weather until tannins naturally come out of the substrate. Clean tannins from surface. If needed, apply a tannin resistant stain blocking primer prior to painting.

METAL: Remove all loose rust, mill scale, or deteriorated previous coatings by Hand Tool (SSPC-SP-2) or Power Tool (SSPC-SP-3) cleaning. Wash surface with a suitable cleaner or degreaser to remove oil and contaminants and allow to dry. Prime ferrous metal with a rust preventative primer as soon as it dries.

PREVIOUSLY PAINTED SURFACES: Remove any peeling, chalky or loose paint, sand to feather edges, and dust clean. Spot prime bare and patched areas. When making a significant color or sheen change, a primer is recommended to aid hide and appearance of the topcoat.

STAIN BLOCKING: When painting over stains or tannins, an appropriate stain blocking primer is recommended before painting.

MIXING: Mix well before use. Purchase enough material to complete your project at the same time. If additional material is needed, retain some of the original non-catalyzed material and intermix the material before application or touch up.

CONTAINERS AND TOOLS: Transfer material into a clean container for use. Use new or thoroughly cleaned tools. To avoid contamination, do not re-dip applicators or add used material into containers being used for storage.

DURING APPLICATION

TESTING: Prior to full application, complete the preparation and apply a test patch to ensure the system chosen is appropriate for the project. If results do not meet expectations, contact Monopole Inc. for recommendations.

GENERAL PAINTING: Primer or sealer is always recommended prior to painting. Apply two separate finish coats to create even color, uniform sheen, maximum durability and easier touch-up. Maintain a wet edge while painting.

WEATHER: Apply product only when material, air, and surface temperature are within the recommendations on page 1 and will remain within that range for at least 24 hours. Temperatures must remain 5° above the dew point during application and dry time. Do not expose to rain, fog, snow or any moisture during application or dry time. Limit exposure to heavy moisture for 24-48 hours after application.

COVERAGE: May vary depending on method of application, porosity and texture of the surface. Measure estimated coverage during the test application.

FILM THICKNESS: Always follow recommendations for application thickness on page 1. Over application may reduce performance and can lead to runs, extended dry times, a soft film, trapped air bubbles, cracking, uneven finish, or a white haze.

BACKROLLING: While spraying, it is recommended to follow with a wet roller to ensure an even coat and fill in porous surfaces. This will reduce pinholes, create uniform sheen and make for easier touch-up.

RECOATING: Always follow recommendations for recoat times on page 1. Recoating too soon or too long after application may reduce performance and lead to adhesion loss, improper cure or a soft film.

AFTER APPLICATION

DRYING: Dry times are based on standard conditions of 75ºF with a relative humidity of 50%. Lower temperatures or higher humidity may extend drying times. Higher temperatures may speed up drying time and shorten pot life. Provide adequate ventilation and air movement during and after application.

STORAGE: Store material at room temperature in clean, tightly sealed containers free of rollers, brushes, or other outside materials. Protect from freezing.

CURE: Coatings may require between 7-30 days after final application for full cure and maximum performance. Cure times vary depending on application and environmental conditions.

CLEANING: Wait until at least two weeks after final application to clean contaminates from the surface. Use fresh water and a small amount of mild detergent or non-solvent cleaner, if necessary. If power washing, use low pressure or wide fan tips to maintain the integrity of the coating.

WARNING! If you scrape, sand or remove old paint from any surface, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Carefully clean up with a wet mop or HEPA vacuum. Before you start, find out how to protect yourself and your family by contacting the U.S. EPA/Lead Information Hotline at 1- 800-424-LEAD (5323) or log on to www.epa.gov/lead.

LIMITATIONS:

OVER APPLICATION: Do not apply heavier than 5 wet mils per coat or over work the material on the surface as it may trap air bubbles, create a white haze, or create an uneven finish.

WATERPROOFING: This coating does not form a waterproofing membrane nor seal inaccessible or below grade areas. It will not bridge cracks, voids, or pores larger than 1/16" nor compensate for flawed construction.

Exposed walls must be capped and the backside of the free standing or retaining walls must be sealed, flashings must be in place and weep holes and drains installed and functioning (where applicable).

MOISTURE INTRUSION: This coating should not be used on surfaces that experience ponding water or hydrostatic pressure. Ensure horizontal surfaces have positive drainage or slope (minimum 1/4″ per foot) to eliminate ponding water. Calcium chloride testing moisture testing is recommended per ASTM F1869.

If there are signs of moisture such as water rings, efflorescence, blistering of previous coatings, etc., the source of the moisture must be corrected prior to application. Moisture intrusion may cause blistering or peeling of the new coating system. Blistering and peeling caused by moisture intrusion are not defects of the coating and are not covered by warranty.

On-grade concrete should have a vapor barrier installed under the substrate or a Moisture Vapor Barrier primer used prior to painting. All exposed sides should be sealed including those adjacent to landscaping, dirt, gravel, or other areas with water run-off. Below-grade areas should have an appropriate waterproofing membrane installed.

Wood and composite doors, planks, deck boards, or sheets should be sealed on all six sides to prevent moisture intrusion.

SPECIAL USES:

ACCELERATOR: Permashield 200 – 2K Polyurethane Accelerator can be used to speed dry and cure times. Accelerator will decrease the finish sheen by half and should always be tested first before full application. Use at a rate of 2oz per gallon kit.

	Standard Mix	**w/ Accelerator @ 2oz per Gallon Kit**
Sheen	Matte or Gloss	Flat or Satin
Pot Life	1-2 Hours	15-20 Minutes
Dry Time	4-6 Hours - Recoat 24-48 Hours - Dry to Touch 7 Day - Return to Service	1-2 Hours - Recoat 4-6 Hours - Dry to Touch 24-48 Hours – Return to Service

FLOOR COATING: Ensure the surface has an adequate profile for adhesion prior to painting. Mechanical grinding of concrete is recommended but not necessary in all cases. Priming is recommended to provide the best performance.

Film forming coatings applied to floors should be extended or 'lipped up' onto adjacent walls, curbs, corners, thresholds, handrail bases, posts, drains, and other transitions where needed to create a continuous sealed surface. Properly fill and seal cracks, seams, joints, penetrations, and surface defects prior to painting and spot prime as needed.

TEXTURE / SLIP-RESISTANCE: Non-skid coatings or aggregate additives are recommended for floor surfaces that may become wet. For pigmented coating systems, mix clean silica sand to achieve the desired texture. For clear coatings, mix a polypropylene aggregate such as Monotex 20 into the coating prior to application.

When applying premixed non-skid coatings or coatings containing aggregate, pour the material directly onto the floor and spread using a low-nap roller (< 3/8"), core roller, or squeegee. Do not use long-nap rollers or aggressively roll textured coatings, as this may cause lumping and an uneven finish.

ADDITIVES: When using additives with two-component products (e.g., aggregates, accelerators, metallics, etc.), thoroughly mix the additive into Part A before combining Part A with Part B.

TUB & TILE REFINISHING: When refinishing glazed or glossy tubs, tile, or countertops, mechanical grinding is recommended to create a profile. Permashield 200 – 2K Polyurethane can then be applied directly to the cleaned, prepared surface. In non-wet areas, mechanical grinding is optional and Monobond High Adhesion Primer can be used on a cleaned surface prior to painting.

WARRANTY: The statements made on this bulletin, product labels or by any of our agents concerning this material are given for information only. They are believed to be true and accurate and are intended to provide a guide to approved construction practices and materials. As workmanship, weather, construction equipment, quality of other materials and other variables affecting results are all beyond our control, Monopole, Inc., does not make nor does it authorize any agent or representative to make any warranty of MERCHANTABILITY OR FITNESS for any purpose or any other warranty, guarantee or representation, expressed or implied, concerning this material except that it conforms to Monopole, Inc's quality control standards. Any liability whatsoever of Monopole, Inc. to the buyer or user of this product is limited to the purchaser's cost of the product itself.