

# MT Resurfacer™

## Technical Data Sheet MT-04

**FOR PROFESSIONAL USE ONLY.** Read all applicable and current product information for your project: Technical Data Sheet (TDS), Color Chart, Installation Guide, Material Safety Data Sheet (MSDS). All information is available for download online at [www.butterfieldcolor.com](http://www.butterfieldcolor.com)

MasterFormat™ Guide Specifications, and Butterfield Color® Architectural Details and Specifications are available for the specifier/designer. All information is available for download online at [www.butterfieldcolor.com](http://www.butterfieldcolor.com)

**1. Description:** MT Resurfacer™ is a polymer modified topping that mixes with water and is designed to create a fresh concrete surface to structurally sound, non-moving, worn or damaged interior concrete surfaces. The cured product creates an abrasion resistant surface ideal for restoring worn or color blemished concrete. When properly installed, MT Resurfacer™ will produce a resilient surface that has a lasting bond to the concrete.

MT Resurfacer™ is a precise blend of graded sand, cement, and polymer, which allow for ultra thin applications. It is a pre-packaged material that is mixed on the job site with clean water. In most cases, MT Resurfacer™ is applied with a squeegee trowel but can also be applied using a trowel. MT Resurfacer™ is available in two grades: Base coat and Finish coat. MT Resurfacer™ Base is used as the prep coat before applying the Finish coat but can also be used to create the final finish. Application thickness range for the Base coat is 1/16 inch (1.6 mm) to 1/8 inch (3.2 mm) and 1/32 inch (0.8 mm) to 1/16 inch (1.6 mm) for the Finish coat. For installations requiring a thicker coating consider using T1000™ Fine Overlay or applying the MT Resurfacer™ Base in lifts of 1/8 inch (3.2 mm).

MT Resurfacer™ is packaged in cement gray and white. These base colors may be colored with a Butterfield Color® Uni-Mix® Integral Color Pack. 24 Standard colors are available. Refer to the Uni-Mix® Integral Concrete Colorant color chart and the Select Grade™ color chart for available colors. Custom colors and colors selected from the Perma-Cast® Shake-on Color Hardener color chart can be formulated with ample lead-time. Note: When MT Resurfacer™ is mixed with a Butterfield Color® Uni-Mix® Color Pack, the cured color will not be an

exact match to concrete colored with integral color or color hardener. MT Resurfacer™ may be stained by applying Perma-Cast® Sierra Stain™ or Elements™ Transparent Concrete Stain. Read the Perma-Cast® Sierra Stain™ Technical Data Sheet and Elements™ Transparent Concrete Stain Technical Data Sheets for more information before installing product.

**2. Limitations:** MT Resurfacer™ is formulated for use over thoroughly clean, structurally sound and non-moving concrete. Surface preparation is required. New concrete must be fully cured before applying the product. Maximum applied thickness for the Base is 1/8 inch (3.2 mm) and for the Finish is 1/16 inch (1.6 mm) in a single application. Do not install product if ambient and substrate temperatures are not between 50° F (10° C) and 85° F (27° C).

MT Resurfacer™ should not be installed in areas subject to steel wheel traffic, strong chemicals, periodic water immersion, or hydrostatic pressure. The cured overlay surface should be sealed for ease of cleaning. Extend existing substrate control joints up through the overlay to minimize random cracks in the overlay. Random cracks in the existing substrate may transfer through the cured overlay even if repaired prior to application.

**3. Cautions:** Harmful if inhaled. This product contains silica (crystalline quartz) and Portland cement. Do not breathe dust. Prolonged exposure can result in Silicosis. Use with adequate ventilation. Portland cement may cause alkali burns. Irritating to eyes and skin. Wear a respirator, safety goggles, gloves, and other protective clothing during installation. Immediately after use, wash any area of exposed skin. If contact is made with

the eyes, flush thoroughly with water, do not rub. Do not take internally. Keep out of reach of children and animals. Dispose of all residual materials according to local, state, and federal regulations. Slip resistant finishes, slip resistant additives must be utilized in order to minimize dry or wet slip. Read the MT Resurfacer™ Material Safety Data Sheet (MSDS) before installing the product.

**4. Packaging:** MT Resurfacer™ is available in two grades: Base coat and Finish coat. Both are available in 25 pound (11.3 kg) bags. Uni-Mix® Color Pack weights vary depending on the color selected.

**4.1 Shelf Life:** 2 years in original, unopened containers, in a climate controlled dry storage area.

**5. Coverage:** MT Resurfacer™ Base coat: 96 square feet (8.9 m<sup>2</sup>) per 25 pound (11.3 kg) bag applied at 1/16 inch (1.6 mm) thickness; MT Resurfacer™ Finish coat: 96 square feet (8.9 m<sup>2</sup>) per 25 pound (11.3 kg) bag applied at 1/16 inch (1.6 mm) thickness. Coverage will vary depending on the depth of installation, substrate texture, and method of application and finishing.

**6. Substrate Preparation:** Remove all potential bond breakers such as grease, oil, paints, sealants, sealers, drywall taping compound, mastics and other contaminants on the surface. New concrete must be fully cured and free from curing and sealing compounds, laitance, or dusting. Slick, hard-troweled floors must be opened and roughened. Refer to International Concrete Repair Institute Guideline #03732 for information on achieving a Concrete Surface Profile (CSP) of #1 - #3. Random cracks must be repaired. Surface preparation may include high-pressure washing, sanding, grinding, shot blasting



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or sandblasting depending on the type of residue being removed. Failure to remove all contamination that impedes the adhesion of MT Resurfacer™ will cause the topping to delaminate. If detergents or soaps are used, all residue must be removed prior to application. Do not acid etch as it may weaken the surface. Pitted areas should be patched and allowed to cure before applying the MT Resurfacer™. Butterfield Color® strongly recommends performing a job site mock-up prior to application using all materials and techniques to be used on the final installation.

**7. Priming:** Apply an even coat of Butterfield Color® T1000™ Primer to the prepared substrate using a paint roller or bristled brush. Shake the bottle of primer thoroughly and dilute 1:1 with water prior to use. Do not apply primer over damp concrete. Coverage is approximately 200 square feet per gallon (4.9 m<sup>2</sup>/L). Take care to protect adjacent surfaces from overspray or splash. Once the application of T1000™ Primer has dried to tack free, apply a second coat of T1000™ Primer with no dilution. Two coats of primer are recommended to ensure added adhesion, especially on porous surfaces or when excessive surface patching was performed. Once the primer has dried to tack free, installation may proceed. MT Resurfacer™ may be applied up to 24 hours after application of primer. Protect primed surface from moisture and contamination. After 24 hours, if the primed surface is exposed to moisture or becomes dirty, the primer must be reapplied. Read the T1000™ Primer Technical Data Sheet before installing product.

**8. Mixing:** Prior to mixing, store all materials in a shaded or cool environment. Mix and install when surface and ambient temperatures are between 50°-85° F (10°-30° C). Mix 2.5 quarts (2.4 L) of potable water per 25 pound (11.3 kg) bag of MT Resurfacer™ Base and 2.75 quarts (2.6 L) of potable water per 25 pound (11.3 kg) bag of MT Resurfacer™ Finish. Do not mix or modify with any other

liquid or chemical. When temperature or humidity changes affect water demand, make small adjustments to the amount of mixing water as needed to achieve proper working consistency. The temperature of the mix water can be adjusted to alter the set time. Chilling the mix water during hot weather and warming the water during cooler temperatures is advisable. Always perform a test area before starting installation. Do not over water. Determine mix ratio before the installation starts. Temperature, humidity, method of application, vertical or horizontal surface, and finished texture will affect the amount of mix water. Measure the water accurately for each batch for the duration of the installation. Color and finished texture will vary if water is not consistently measured for each batch.

Always add water to the 5 gallon (18.9 L) pail before adding dry materials. Never add water directly to the dry material, as lumping may occur. When coloring is used, slowly add the Butterfield Color® Uni-Mix® Color Pack while mixing, using a 600 rpm drill and paddle, followed by the MT Resurfacer™. Do not introduce air bubbles into mixture by bringing the mixing head in and out of the wet material while mixing.

Continue to mix for a minimum of 3 minutes until a smooth, uniform, lump-free, and a streak-free color has been achieved. Utilize a drill and mixing paddle that are capable of mixing a mortar like material. Do not mix by hand. Once mixed for 3 minutes, allow material to sit idle in the bucket for 3 minutes, followed by an additional 2 minutes of mixing. If the mixture loses its plasticity during installation, do not re-temper with water or add previously mixed material to new batches. Do not mix more material than can be correctly applied within 20-30 minutes at 70° F (21° C). Keep mixing pail free of dried build up. Change or clean mixing pail frequently to avoid pouring hardened lumps onto the substrate.

**9. Installation:** Mark the location of all control joints in the concrete sub-

strate in order to saw cut joints into the overlay exactly over those existing joints. The overlay joints must be full depth and as wide as the existing substrate joints.

All repair and patching compounds must be fully cured and properly primed before applying MT Resurfacer™. Install freshly mixed MT Resurfacer™ with a squeegee trowel, or trowel over the properly prepared concrete substrate. When used, allow T1000™ Primer to dry tack free before installing MT Resurfacer™. Maximum applied thickness is 1/8" (3.2 mm) for the Base coat and 1/16" (1.6 mm) for the Finish coat in a single application. For applications thicker than 1/8" (3.2 mm), apply MT Resurfacer™ Base in lifts of 1/8 inch (3.2 mm) allowing material to dry for 3-4 hours after each layer placement at 70° F (21° C), and then apply the next layer. Re-coat time will vary with humidity and ambient and substrate temperatures. For the best adhesion, place additional layers in the same manner, before the underlying layer dries completely.

Always maintain a wet edge during application. Terminate pours at existing joint lines, walls or other fixed objects. If a pour is terminated in the center of the floor or at a doorway between rooms for example, delineate the stopping point with a taped line. Only use blue painter's tape. Pour and distribute MT Resurfacer™, just overlapping the tape, but not completely covering the tape. Remove tape as soon as the overlay has achieved initial set and before it has dried. This will leave a straight cold joint for the start of the next pour. Once the tape is removed be sure to re-prime the area that was under the tape.

**9.1. Squeegee Trowel Application:** Once material is thoroughly mixed, immediately pour MT Resurfacer™ from the mixing pail onto the concrete surface. Pour a 3" wide bead of material across the area to be covered. Spread evenly with squeegee trowel, always keeping a wet edge. Add additional material as needed in small increments. Keep tools free of build up





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by cleaning frequently with water before the MT Resurfacer™ dries completely. Apply material at a consistent thickness to minimize random shrinkage cracking.

Do not overwork the surface or allow the material to dry out during placement. If material begins to drag behind the squeegee then it should be removed and new material should be used. Do not attempt to trowel the material that has been placed with a magic trowel. If the desired look is a troweled finish then follow the guidelines for trowel application.

**9.2 Trowel Application:** Once material is thoroughly mixed, immediately pour MT Resurfacer™ from the mixing pail onto the concrete surface. A gauge rake, pool trowel or fresno may be used to distribute the product. Final finishing can be accomplished with a stainless steel trowel. Use of spiked knee boards and/or spiked shoes is recommended if you must go out onto the material while final finishing. Keep tools free of build up by cleaning frequently with water before the MT Resurfacer™ dries completely. Apply material at a consistent thickness to minimize random shrinkage cracking.

**10. Curing:** Curing time varies with ambient and substrate temperatures and humidity. The surface can be walked on gently approximately 4-6 hours after placement at 70° F (21° C). Cool ambient and surface temperatures may delay cutting. Allow to cure for a minimum of 72 hours before opening to heavy traffic.

Saw cutting of control joints directly over the existing control joints in the concrete substrate should be completed within 12 hours after installation, once the surface has gained adequate strength so as not to be damaged by the saw cutting process. Cool ambient and surface temperatures may delay sawing.

**11. Staining:** For natural appearing color variations, MT Resurfacer™ can be colored with Perma-Cast® Sierra Stain™ or Elements™ Transparent Concrete Stain. The overlaid surface should be cured for a minimum of 48 hours before applying Perma-Cast® Sierra Stain™ or Elements™ Transparent Concrete stain. Do not utilize aggressive cleaning methods until MT Resurfacer™ is thoroughly cured. Read the Perma-Cast® Sierra Stain™ Technical Data Sheet and Elements™ Transparent Concrete Stain Technical Data Sheet before installing product.

**12. Sealing:** Clear Guard® H<sub>2</sub>O Cure and Seal or Clear Guard® H<sub>2</sub>O Wet Look should be applied after the surface has cured for a minimum of 72 hours at 70° F (21° C). Application of a solvent-based sealer prior to 72 hours may weaken the surface of an overlay. Sealed surfaces may become slippery when wet. Sealed surfaces will require maintenance. Read the Clear Guard® H<sub>2</sub>O Cure and Seal and Clear Guard® H<sub>2</sub>O Wet Look Technical Data Sheets before installing product.

**13. Repair:** Damage to the cured overlay surface should be repaired with MT Resurfacer™. Once the cause of the damage has been determined and corrected, the deteriorated area should be cut and chipped to the minimum applied depth of the product. If damage to the underlying concrete exceeds the maximum allowable thickness of MT Resurfacer™, use a suitable patching compound to repair the concrete, prior to the application of MT Resurfacer™.

The repair cavity should be chipped to a uniform depth to minimize random shrinkage cracking in the repair materials. The perimeter of the repair cavity should be saw cut or chipped out to prevent feather edging of the patching compound. All dust and contamination should be removed before application

of the primer, patching compound, or MT Resurfacer™. The repaired area may appear differently than adjacent surfaces. Repair materials and methods should be evaluated and confirmed with a repair mock-up.

**14. Quality Control:** Cast a job site sample at least 21 days prior to the installation for approval of color and finish. Utilize all materials, tools, and techniques from the actual job in the mock-up. Consistent batching, pouring, finishing, curing, sealing, and preparation techniques, will ensure the uniformity of architectural concrete. Verify adequate wet and dry slip resistance. Discuss maintenance requirements. Site visits by Butterfield Color, Inc. Personnel are for making technical recommendations only and not for supervising or providing quality control. Maintenance requirements should also be discussed.

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