

T1000™ Stampable Overlay

Technical Data Sheet T1000S-01



MARSHALLTOWN
The Premier Line

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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).

1. Description: T1000™ Stampable Overlay is a polymer modified cementitious topping formulated for resurfacing structurally sound, non-moving concrete floors and exterior hardscapes. The overlay provides a durable surface suitable for stamping with

Stamping Tools or textured with MARSHALLTOWN Texture Rollers. The cured product creates an abrasion resistant surface suitable for pedestrian and automobile traffic. It is an ideal system for restoring worn or color-blemished concrete, out of level surfaces or correcting construction errors. Properly applied to clean and sound concrete, T1000™ Stampable Overlay is freeze/thaw resistant. 21-day compressive strength is 5250 psi (36.2 MPa).

T1000™ Stampable Overlay is a precise blend of graded sand, cement, and polymer, which allow for thin applications. A pre-packaged material that is mixed on the jobsite with clean water, it can be stamped textured or roller textured. Application thickness ranges from 1/8 inch (3mm) to a maximum of 1/2 inch (13 mm).

T1000™ Stampable Overlay is packaged in medium gray or white colors. Those base colors may be colored with a Uni-Mix® Color Pack. 24 colors are available. Refer to the Uni-Mix® Integral Colorant color chart for available colors.

Note: When T1000™ Stampable Overlay is mixed with a Uni-Mix® Color Pack, the cured color will not be an exact match to concrete colored with integral color

T1000™ Stampable Overlay medium gray, white or colored materials may be chemically stained by applying Perma-Cast® Sierra Stain™. Read the Perma-Cast® Sierra Stain™ Technical Data Sheet before installing product.

2. Limitations: T1000™ Stampable Overlay 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 is 1/2" (13 mm) in a single application. Do not install product if ambient and substrate temperatures are not between 45° F (7° C) and 85° F (30° C), unless site conditions can be modified to correct for temperature extremes.

T1000™ Stampable Overlay 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, particularly on interior floors. Extend existing substrate control joints up through the overlay to minimize random cracks in the overlay. Random cracks in the substrate, if not properly repaired, may transfer through the cured overlay.

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 T1000™ Stampable Overlay Material Safety Data Sheet (MSDS) before installing the product.

4. Packaging: T1000™ Stampable Overlay is available in 55-pound (25 kg) bags. Uni-Mix® Color Pack weights vary from 0.5 – 1.25 pounds (0.23 – 0.57 kg), depending on the color selected. The shelf life of T1000™ Stampable Overlay in unopened, original containers, stored away from sources of heat and moisture, is 1 year from the date of purchase. Uni-Mix® Color Pack shelf life in unopened, original packages is 2 years.

5. Coverage: The coverage rates of one 55-pound (25 kg) unit of T1000™ Stampable Overlay are approximately:

24 SF at 1/4" thick (2.2m² at 6 mm thick)
16 SF at 3/8" thick (1.5m² at 9 mm thick)
12 SF at 1/2" thick (1.1m² at 13 mm thick)

Coverage will vary depending on the depth of installation, substrate texture, and method of application and finishing. When imprinting T1000™ Stampable Overlay with MARSHALLTOWN Stamping Tools, the overlay should be applied at a thickness

equal to the depth of the mortar joint that will be imprinted with the stamping tool. Material applications that are too thin or too thick may not allow for the accurate transfer of pattern and texture into the overlay product.

6. Substrate Preparation: Remove all potential bond breakers such as grease, oil, paints, sealants, 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. Random cracks must be repaired.

Surface preparation may include high-pressure washing, grinding, scarifying, shot blasting, or sandblasting, depending on the type of residue being removed and surface profile required. Refer to the International Concrete Repair Institute Guideline #03732 for information on achieving a Concrete Surface Profile (CSP) of #3 - #5. Failure to remove all contamination that impedes the adhesion of T1000™ Stampable Overlay will cause the topping to delaminate. Detergents or soaps should not be used since they may leave a surface residue. Do not acid etch as it may weaken the surface. Unsound concrete must be removed down to sound concrete.

7. Priming: Apply an even coat of MARSHALLTOWN T1000™ Primer to the prepared substrate using a paint roller or bristled brush. Do not apply primer over damp concrete. Coverage is approximately 200 sq. ft. per gallon (4.9 m²/L). Take care to protect adjacent surfaces from overspray or splash. Once the application of T1000™ Concrete Primer has dried tack free, installation may proceed. Note: If the initial application of primer contains bubbles or pinholes, a second application of primer is required before installing T1000™ Stampable Overlay. Additionally, rough or very porous concrete substrates may also require a second application of primer. Read the MARSHALLTOWN T1000 Primer Technical Data Sheet T1000P-03 before applying.

T1000™ Stampable Overlay may be applied as much as 24 hours after application of the primer. Do not expose the primed surface to moisture or contamination. After 24 hours, if the primed



surface is exposed to moisture or becomes dirty, the primer must be reapplied. Note: On stamping or texturing jobs, when installation is to be made in multiple pours over a common concrete substrate area, care must be taken to protect the prepared and primed concrete from contamination with release powder or liquid. Read the MARSHALLTOWN T1000™ Primer Technical Data Sheet T1000P-03 before installing product.

8. **Mixing:** Mix and install when ambient temperatures are between 45°-85° F (7°-30° C). Use 3.7-4.0 quarts potable water per 55-pound (3.5-3.8L/25kg) bag of MARSHALLTOWN T1000™ Stampable Overlay. When temperature or humidity affect water demand, make small adjustments to the amount of mixing water as needed to achieve proper working consistency. Do not over water. Measure the water accurately and consistently from batch to batch. Always add water to the container first. Then, if color is to be used, add the MARSHALLTOWN T1000™ Color Pack while mixing, using a 600 rpm drill and a paddle or mortar mixer, followed by the MARSHALLTOWN T1000™ Stampable Overlay. Continue to mix for a minimum of 3 minutes until a smooth, uniform, lump-free consistency and a streak-free color has been achieved. If mixture loses its plasticity, do not retemper with water or add previously mixed material to new batches.

9. **Installation:** Mark the location of all working joints in the concrete substrate, in order to saw cut joints through the overlay exactly over those existing joints. The overlay joints must be full depth and as wide as the existing substrate joints. Existing substrate joints should be filled with T1000™ Stampable Overlay and achieve initial set before applying the overlay. This will prevent the existing joints from creating a shadow in the cured material. This same technique may be used with non-moving random cracks.

All repair and patching compounds must be fully cured before applying T1000™ Stampable Overlay and T1000™ Primer. Maximum applied thickness is 1/2 inch (13 mm) in a single application. For thicker applications, allow material to dry for 8 hours after placement at 70° F (21° C), and then apply a second layer. Place additional layers in the same manner. Do not apply T1000™ Stampable Overlay over standing or visible moisture on the primed surface.

During hot and windy weather, an evaporation retarder may be applied to the T1000™ Stampable Overlay surface to reduce moisture loss, which would cause shrinkage cracking and make the surface difficult to finish. The evaporation retarder

can be directly sprayed onto the overlay. Read the manufacturer's instructions thoroughly before using this product.

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 T1000™ Stampable Overlay, 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.

9.1. **TROWEL APPLICATION:** Once material is thoroughly mixed, immediately pour T1000™ Stampable Overlay from the mixing pail onto the concrete surface. A pool trowel or fresno may be used to distribute the product. Similarly, a gauge rake can be used to distribute the overlay to a specific and consistent depth before lightly finishing with a pool trowel. This is particularly important when the T1000™ Stampable Overlay will be stamped with MARSHALLTOWN Stamping Tools and MARSHALLTOWN Texture Rollers. Keep tools free of build up by cleaning frequently with water before the T1000™ Stampable Overlay dries completely. Apply material at a consistent thickness to minimize random shrinkage cracking.

Do not overwork the surface with the pool trowel. Do not hard trowel T1000™ Stampable Overlay. Finishing time will vary with temperature, wind, humidity, use of a primer or an evaporation retarder. Do not mix or apply more material than can be handled effectively for the installation. If the surface finish of the overlay is not satisfactory, scrape and remove the problem area before it starts to dry and then reapply the overlay. Note: the reapplied material may be visually different from the surrounding surface.

9.2. **STAMPING OR TEXTURING:** Place or distribute freshly mixed T1000™ Stampable Topping material by pool trowel or gauge rake over properly prepared concrete substrate. A gauge rake is strongly recommended in order to achieve a consistent depth to receive the pattern and texture. Imprinting time will vary widely depending on temperature, humidity and overlay thickness. Begin stamping as soon as mixture has set sufficiently to achieve a clean impression, usually 20 to 60 minutes after placement. Use MARSHALLTOWN Clear Liquid Release prior to placing stamps or texture roller. Existing control joints should be

mapped out prior to placement of T1000™ Stampable Overlay and re-cut before cracking occurs. Protect T1000™ Stampable Overlay from rain for 24 hours after placement. Read the MARSHALLTOWN Clear Liquid Release Technical Data Sheet before installing products.

10. **Curing:** T1000™ Stampable Overlay is self-curing. However, during hot weather or windy conditions, fog misting, curing paper (conforming to ASTM C 171), or polyethylene sheets may be used to minimize plastic shrinkage cracking. The method of curing may affect the final color of T1000™ Stampable Overlay. Verify curing method and timing with a mock up. Once the curing method has been determined, utilize consistently throughout the installation. Curing time varies with ambient and substrate temperatures, and humidity. The surface can be walked on gently approximately 4 hours after placement at 70° F (21° C). Cure for a minimum of 96 hours before opening the surface to automobile traffic. A full 28-day cure is required before heavy traffic or exposure to freeze/thaw cycling.

Saw cutting of control joints directly over the existing control joints in the concrete substrate should be completed within 14 hours after installation, once the surface has gained adequate strength so as not be damaged by the saw cutting process. Cool ambient and surface temperatures may delay sawing.

11. **Chemical Staining:** For natural appearing color variations, T1000™ Stampable Overlay can be colored with Perma-Cast® Sierra Stain™. The stain may be applied to a stamped or textured surface. The T1000™ Stampable Overlay should be fully cured, clean, and dry before applying Perma-Cast® Sierra Stain™. Do not utilize aggressive cleaning methods until T1000™ Fine Overlay is thoroughly cured. Read the Perma-Cast® Sierra Stain™ Technical Data Sheet before installing product.

12. **Sealing:** Clear Guard™ Cure and Seal 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™ Cure and Seal Technical Data Sheet before installing product.

13. **Repair:** Damage to the overlay surface should be repaired with T1000™ Stampable Overlay. 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, 1/8 inch (3 mm). If damage to the underlying concrete exceeds the maximum allowable thickness of T1000™ Stampable Overlay, 1/2 inch (13 mm), use a suitable patching compound to repair the concrete, prior to the application of T1000™ Stampable Overlay or apply T1000™ Stampable Overlay in multiple applications, not exceeding 1/2 inch (13 mm) in a single application.

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 patching compound or T1000™ Stampable Overlay. 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.

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