

Shur Deck

Waterproof, Fire-Resistive Roof & Pedestrian Decking

Application Guide



APPROVALS

- One-Hour Fire Resistive Rating
- Class A Roofing & Decking System
- ICC-ES - Report No. 5968

MATERIAL STANDARDS

- AC 39/Section 4.3
- AC 39/Section 4.8
- ASTM 1242A
- ASTM C-109
- ASTM C-190
- ASTM C-297
- ASTM C-67
- ASTM C-794
- ASTM D-2047
- ASTM D-2240
- ASTM D-412
- ASTM D-570
- ASTM D-756
- ASTM E-108
- MIL-D-3134
- (Para. 4.7.6; Para. 3.9, 4.7.4)
- UBC 15-2

SPECIFICATION CLASSIFICATIONS

- 07 55 56 Fluid-Applied Protected Membrane Roofing
- 07 55 53 Elastomeric Protected Membrane Roofing
- 07 25 00 Weather Barriers
- 07 19 00 Water Repellents
- 07 18 13 Pedestrian Traffic Coatings
- 07 16 13 Polymer Modified Cement Waterproofing
- 07 14 16 Cold Fluid-Applied Waterproofing
- 09 94 13 Textured Finishing
- 09 94 16 Faux Finishing
- 09 96 13 Abrasion-Resistant Coatings

MATERIALS NEEDED

- 10" Burlap
- 40" Burlap (*fabric option*)
- Glassmat Type II (*fabric option*)
- Mer-Ko Seal Satin (*topcoat option*)
- Mer-Ko Seal SG (*topcoat option*)
- Mer-Thane Sealer (*topcoat option*)
- Metal Lath, 2.5 Galvanized
- Prep Seal Primer
- Shur Deck Compound
- Shur Deck Waterproofing Membrane
- Staples, 1" Crown x 5/8"

PRODUCT DESCRIPTION

Shur Deck is a multi-layer, water-based, cementitious roof and walking deck system designed for use over plywood or concrete substrates. This system consists of reinforcing metal lath, neoprene rubber latex resin, cementitious powder filler, flexible latex waterproofing membrane and acrylic sealer. Installed at a 3/16" (4.8mm) finished thickness, this seamless, trowel applied system provides long-term durability and waterproofing protection and prevents cracking over plywood or concrete substrates.

Shur Deck incorporates flashing for drains, vertical surfaces and thresholds. Metal lath reinforcement provides stress relief for thermal expansion and moderate seismic movement. Sloping and integral coving can be incorporated for additional protection against water penetration and pooling and to prevent elevation problems at doorways, landings, steps, etc.

Shur Deck's seamless, flexible, skid-resistant, crack-resistant, waterproofing walking surface offers a wide variety of finish options and textures to ensure maximum design flexibility and aesthetic appeal.

USES/APPLICATIONS

- Exterior Flat/Walking Roof Decks
- Observation Decks
- Promenade Decks & Balconies
- Commercial & Residential Pedestrian Traffic Areas
- Elevated and On-Grade Walkways, Breezeways & Exterior Corridors

SUBSTRATES

Shur Deck can be installed over sound, solid, dry, properly prepared plywood or concrete substrates.

PACKAGING

	<u>Gallons (U.S.)</u>	<u>Metric Units</u>
Primer		
Shur Deck Compound.....	50 lb. bag.....	22.7 kg bag
Bondcoat		
Shur Deck Compound.....	50 lb. bag.....	22.7 kg bag
Waterproofing Membrane		
Shur Deck Waterproofing Membrane	5 gallon pail.....	19.8 liter pail
Fabric Options		
Glassmat Type II	1,200 sq. ft. roll.....	111.5 m ²
Synthetic Burlap 10"	300 in. ft. roll.....	91 L/m ²
Synthetic Burlap 40"	300 in. ft. roll.....	91 L/m ²
Bodycoat		
Shur Deck Compound.....	50 lb. bag.....	22.7 kg bag
Intercoat Primer		
Prep Seal Primer	2&5 gallon pails.....	7.6&19.8 liter pails
Topcoat		
Mer-Ko Seal	2&5 gallon pails.....	7.6&19.8 liter pails
Mer-Ko Seal Satin (<i>option</i>)	2&5 gallon pails.....	7.6&19.8 liter pails
Mer-Ko Seal SG (<i>option</i>)	2&5 gallon pails.....	7.6&19.8 liter pails
Mer-Thane Sealer (<i>option</i>)	2&5 gallon pails.....	7.6&19.8 liter pails

COVERAGES

Note: Coverage rates are approximate only and can vary greatly due to surface conditions, humidity, temperature and installation techniques.

Base Flashing –

Primer Coat.....100 ln. ft. (30.48 L/m)/1.4 gallons
Yield: 20 mil (0.51mm) DFT

Primer Coat over Concrete..... 180 sq. ft. (16.7 m²)/50 lb bag mix
Yield: 126 mil (3.2mm) DFT

Bondcoat.....40-45 sq. ft. (3.72-4.18 m²) / 50 lb bag mix
Yield: 126 mil (3.2mm) DFT

Base Flashing –

Reinforced Waterproofing Membrane

Shur Deck Waterproofing Membrane

Flashing Application.....150 ln. ft. (45.72 L/m)/5 gallon pail
Yield: 30 mil (0.76mm) DFT

Synthetic Burlap 10"..... 300 ln. ft. (30.5 L/m)/roll

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Reinforced Waterproofing Membrane 100 sq. ft. (9.29m²)/5 gallon pail
Yield: 63 mil (1.6mm) DFT

Glassmat Type II.....1,200 sq. ft. (111.48m²)/roll
40" Burlap (fabric option)..... 1,000 sq. ft. (92.9m²)/roll

Shur Deck Waterproofing Membrane

2nd Base Application.....200 sq. ft. (18.58m²)/5 gallon pail
Yield: 30 mil (0.76mm) DFT

Bodycoat180 sq. ft. (16.7 m²)/50 lb bag mix
Yield: 63 mil (1.6mm) DFT

Texture Coat (optional) 200 sq. ft. (18.58 m²)/50 lb bag mix
Yield: 63 mil (1.6mm) DFT

Intercoat Primer..... 750-800 sq. ft. (27.87-37.2m²)/2 gallon mix
1,750-2,000 sq. ft. (69.68-92.9m²)/5 gallon mix

Note: Always apply Prep Seal intercoat primer after the bodycoat or texture coat, when applicable, and between any Shur Deck system layers that have cured for 72 hours or more. Do not leave any layer unprotected for more than 90 days prior to completing the full system installation, including final topcoat application.

Topcoat 300-400 sq. ft. (27.87-37.2m²)/2 gallon mix
750-1,000 sq. ft. (69.68-92.9m²)/5 gallon mix

COLORS

Shur Deck is available in 15 standard colors available in satin and semi-gloss finishes. Reference the Color Selection Guide for additional details. Custom colors are available upon request.

Notes: ¹Production run colors may vary from color chart. Printed color charts are as closely representative to actual colors as modern printing technology allows. Final color selection should be made from an actual sample. ²Additional fees and lead times are required for custom color orders.

INSTALLATION CONDITIONS

The Shur Deck system must not be installed if the ambient temperature is below 40°F (4.4°C) or above 100°F (37.8°C), or when precipitation is expected or occurring.

SUBSTRATE PREPARATION

The substrate surface must be structurally sound, clean, dry and free of dirt, dust, oil, grease, paint or other contaminants at the time of material application. A minimum deck slope of 2% (1/4 unit vertical in 12 units horizontal) is required for proper drainage. Plywood sheets must be installed lying lengthwise across supporting joists. Ensure that all flashings are in accordance standard Parex Mer-Ko details. Clean all metal flashing with alcohol.

Concrete Surfaces

Concrete surfaces must be clean, sound and have a finish equivalent to steel troweling to provide a smooth, uniform surface, free of depressions and ridges. All holes, cracks and joints must be cleaned and filled with an appropriate Mer-Ko Underlayment. All high spots must be removed by chipping or grinding.

Plywood Surfaces

Plywood substrates shall be a minimum 5/8 inch thick (15.9mm), exterior grade plywood complying with UBC Standard 23-2 or 23-3, and must be installed in accordance with the 1997 Uniform Building Code™ (UBC). All plywood edges must be blocked or tongue-and-grooved. Face plies must be perpendicular to the supports. The plywood must be attached to all blocking and end bearings with countersunk wood screws or screw-shank nails equivalent to 10d common ring-shank nails, spaced 6 inches (152mm) on center, or as otherwise required by the UBC, whichever is more restrictive.

Note: Shur Deck cannot be installed over chip board.

APPLICATION INSTRUCTIONS

Base Flashing – Primer Coat

Using No. 28 gage galvanized steel or equivalent flashing around the perimeter, brush apply a primer coat using Shur Deck Compound wetted out to a slurry mixture along the flashing and extending 12 inches (305mm) onto the deck surface. Allow the primed area to dry for a minimum of one (1) hour.

Metal Lath

Metal lath is installed over the entire deck area with the seams butted together and not overlapped. Lath must be installed over metal flashing, stopping a maximum of two (2) inches (50.8mm) from any deck edge or vertical juncture. Plastic lath can also be used provided it is rated as an equal to 2.5 galvanized metal lath. The lath seams must be staggered a minimum of two (2) inches (50.8mm) from plywood joints. A minimum of 22 staples per sq. ft. (238 staples per sq. m.) is required to attach the lath to the plywood substrate. In addition, the lath seams are attached to the plywood substrate with 12 staples per ln. ft. (38 staples per ln. m.) with the staples crossing the seam. Staples must be placed from the center of the lath to the outside edges so as not to form bulges.

Bondcoat

Mix one (1) 50 lb. (22.7kg) bag of Shur Deck Compound with one (1) to one and one quarter (1-1/4) gallons of water. Trowel apply over the metal lath ensuring complete coverage of the metal and the plywood substrate. Apply at a minimum 1/8 inch (3.2mm) thickness. Allow a minimum eight (8) hour cure time before continuing. Applications in elevated humidity conditions will require additional cure time.

Note: After cure, check the surface of the bondcoat and remove minor surface imperfections and high points by lightly trowel scraping the area.

Primer Coat over Concrete

When applying Shur Deck over a concrete substrate, eliminate the metal lath and bondcoat steps above. After properly preparing the concrete substrate, apply a primer coat mix of Shur Deck Compound wetted out to a slurry mixture over the entire horizontal substrate. Ensure all flashings and drains are well coated. Allow the primed area to cure for 4-6 hours. Applications in elevated humidity conditions will require additional cure time. Then, proceed as follows.

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Base Flashing – Reinforced Waterproofing Membrane

Waterproof the flashing area by brush applying one coat of Shur Deck Waterproofing Membrane onto the primed surface. Immediately embed the 10" synthetic burlap fabric into the wet Waterproofing Membrane and follow with a second Waterproofing Membrane coating to ensuring complete saturation. The burlap is to be approximately 4 inches (102mm) wide on all vertical surfaces and approximately 5 inches (127mm) wide onto the flat surface. Make sure the burlap is fitted tightly in corners and around protrusions. Allow to cure.

Note: Be sure to install the Glassmat Type II fabric or synthetic burlap with the filament side down.

Reinforced Waterproofing Membrane

Trowel apply one (1) thick coat of Shur Deck Waterproofing Membrane over the cured bondcoat (or primer coat when applied directly over concrete) ensuring complete coverage. Brush apply to cover edge areas. After the first thick coat of Waterproofing Membrane has been applied and while the material is still wet, embed the Glassmat Type II fabric; firmly trowel-push the fabric into the wet membrane material to ensure that it is completely embedded. No dry or fabric material spots should be visible and the fabric should lay completely flat and without wrinkles. Then, immediately roller or trowel apply a second coat of Shur Deck Waterproofing Membrane to ensure complete saturation.

Note: Be sure to install the Glassmat Type II fabric or synthetic burlap with the filament side down.

Apply each coat at a minimum 1/16 inch (1.6mm) thickness. Allow the entire area to dry thoroughly, usually overnight, until dry enough to walk on without leaving impressions. Applications in elevated humidity conditions will require additional cure time.

Note: Apply the membrane/fabric/membrane layers in small sections working across and off the deck surface. This will reduce installation time and minimize the opportunity for wet material to be tracked off of the deck and require additional clean-up.

Bodycoat

Mix one (1) 50 lb. (22.7kg) bag of Shur Deck Compound with one (1) to one quarter (1-1/4) gallons of water. Trowel apply smooth leaving no scratch or drag marks over the waterproofing membrane ensuring complete coverage. Apply at a minimum 1/16 inch (1.6mm) thickness.

Note: Allow aggregate size to assist in determining the correct thickness.

Allow a minimum one (1) hour cure time before continuing. Applications in elevated humidity conditions will require additional cure time.

Texture Coat – Optional

A texture coat consisting of the identical material mix used for the Bodycoat may be applied using a hopper gun if desired. Use a trowel to knock-down or flatten the material while it is still wet. Allow a minimum one (1) hour cure time before applying the topcoat layers. If necessary, lightly sand the texture after cure and before proceeding.

Note: Always apply Prep Seal intercoat primer after the bodycoat or texture coat, when applicable, and between any Shur Deck system layers that have cured for 72 hours or more.

Topcoat – 1st Application

Sweep the entire deck surface clean of any residual dust or debris. Roller apply Mer-Ko Seal (Satin or Semi-Gloss finish) or Mer-Thane Sealer in a sample area using applicable finish texture techniques and color to verify the desired finish. Upon approval, apply Mer-Ko Seal or Mer-Thane Sealer in the selected color to all vertical, base and flat deck areas with a 3/16 inch to 3/4 inch nap roller. Allow a minimum one (1) hour cure time between coats. Applications in elevated humidity conditions will require additional cure time.

Note: ¹Silica sand or quartz aggregate can be broadcast into the topcoat to provide additional texture and increased skid-resistance. A urethane topcoat must be used when additional aggregate is desired. ²Additional material will be required for textured finishes.

Topcoat – 2nd Application

Roller apply the second Mer-Ko Seal or Mer-Thane topcoat in the selected color and finish perpendicular to the first. Allow to dry for a minimum of one (1) hour before returning to light service; six (6) to eight (8) hours for normal service.

CAUTIONS & LIMITATIONS

- The substrate surface must be structurally sound, clean, dry and free of dirt, dust, oil, grease, paint or other contaminants at the time of material application. A minimum deck slope of 2% (1/4 unit vertical in 12 units horizontal) is required for proper drainage.
- The substrate must be smooth. Irregularities, if not corrected, will reflect on the Shur Deck surface. For example, if a quarry tile deck has irregular grout joints which are not smoothed with underlayment, the grid pattern will show on the Shur Deck surface.
- Minimum standards for wood surfaces are 5/8 inch exterior plywood over 16 inch on center joists or 1/2 inch exterior grade plywood over sheathing.
- In freezing climates, sufficient pitch is required to ensure run-off. When covering a "sandwich slab" or quarry tile deck, provision must be made to vent the envelope created between the existing vapor barrier and the Shur Deck.
- Drains must be of a design suitable to receive Shur Deck flashing.
- Concrete substrates must have a minimum compressive strength of 1,000 psi tested by "point loading" technique.
- The moisture content of the substrate should be checked and approved by an authorized Mer-Ko installer prior to installation.
- When contemplating a deck installation with an open soffit, or over an unheated enclosed space (e.g., garage, etc.) in freezing, damp or severe climates, consult Mer-Ko for recommendations.
- Heavy objects can affect movement of the slip sheet decking system and result in hairline cracks at the surface of the system. Avoid placing heavy object on or dragging them across the Shur Deck surface.
- Shur Deck provides moderate chemical resistance. Avoid exposure to harsh chemicals or acids.

CARE & MAINTENANCE

Shur Deck is designed to provide easy cleanability and low-maintenance. To extend the life of the deck to its maximum potential, establish a regular cleaning schedule using a mild soap and water solution, TSP (Tri Sodium Phosphate), Formula 409® Antibacterial All Purpose Cleaner or Formula 409® Glass & Surface Cleaner or similar products. Use a stiff broom or scrub brush to remove any contaminants on the surface of the deck. Rinse thoroughly with clean water after scrubbing. Do not use solvents to remove contaminants as this may cause damage to the deck surface.

The colored topcoat is designed to resist direct exposure to environmental elements and withstand normal wear. When traffic patterns become visible or heavy impacts mar the surface, the topcoat should be re-applied to restore aesthetic appeal. Decks should be re-sealed every three (3) years for best results, or per the schedule listed on the warranty issued. *(Note: The performance and function of the Shur Deck system is not impacted by aesthetic imperfections.)* Refer to Shur Deck's Care & Maintenance Instructions for more detailed information on proper care and re-sealing.

STORAGE & HANDLING

Store all Shur Deck materials in a dry environment at temperatures between 40°F and 100°F (4.4°C and 37.8°C). All materials should be stored in compliance with local fire and safety requirements. Do not store at high temperatures or in direct sunlight.

SHELF LIFE

The shelf life is six (6) months from the date of manufacture in the original, unopened container when the material is stored at temperatures between 40°F and 100°F (4.4°C and 37.8°C).

WARRANTY

Five (5) and ten (10) year warranties are available, in addition to a five (5) year extension program, depending upon product selection, project design and customer warranty needs. Contact Mer-Ko's Customer Service Department for specific warranty information.

TECHNICAL ASSISTANCE

Specification assistance is highly recommended during the initial design process to ensure the most effective engineering details and product selection for long-term durability and protection. Technical assistance for all product and application questions is available by contacting your local Mer-Ko Representative at (800) 851-6303.

Any recommendation or suggestion relating to the use of MER-KO products made via current technical literature, marketing materials, application guides, specifications, and the like, or in response to specific inquiry or otherwise, is based on data believed to be reliable. However, the products and information are intended for use by Buyers having requisite skill and know-how in the industry. Therefore, it is the responsibility of the Buyer to satisfy the necessary requirements of suitability of the products for its own particular use, and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. Mer-Ko believes the information contained herein is true and accurate as of the date of publication. Information contained here is for evaluation only. Mer-Ko reserves the right to modify and/or change products or literature at any time and without prior notice.

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