



Mer-Thane 500 Specifications

CSI SECTIONS 07 14 16
CSI SECTIONS 07 18 13

CSI SECTION 07 14 16 - Cold Fluid-Applied Waterproofing
CSI SECTION 07 18 13 - Pedestrian Traffic Coatings

SYSTEM OVERVIEW

The Mer-Ko™ Mer-Thane 500 Elastomeric Urethane Pedestrian Decking System is a Two-Componente, multi-layer, solvent-free, low odor, moisture cured, fluid applied, urethane elastomeric waterproofing membrane system which uses an integrally colored, aliphatic, single component, moisture cured, urethane elastomeric topcoat for use over plywood, concrete or over other approved substrates.

Mer-Thane 500 system is installed using the following components:

- Primer Coat
- Joint and Crack Treatment (as necessary)
- Waterproof Membrane
- Aggregate (for Slurry)
- Skid-Resistant Aggregate
- Topcoat

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Installation of multi-layer Elastomeric Urethane Pedestrian Decking System designed for use over plywood, concrete or other approved substrates.
 1. Related Work: Substrate; Plywood or Concrete
- B. Work not Included:
 1. Finishing and corrective work in connection with surfaces to receive the system.
 2. Furnishing and installing metal flashings, drains, vents, ducts, curbs, expansion joints or any other through deck penetration.

1.2 RELATED SECTIONS

- A. Section 06 16 33 - Plywood Sheathing
- B. Section 03 00 00 - Cast In Place Concrete
- C. Section 03 05 00 - Underlayment
- D. Section 07 62 00 - Sheet Metal Flashing and Trim
- E. Section 07 90 00 - Joint Protection

1.3 REFERENCE

- A. ASTM C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
- B. ASTM D412- Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers
- C. ASTM D624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers
- D. ASTM D2240 - Standard Test Method for Rubber Property—Durometer Hardness

1.4 SYSTEM DESCRIPTION

A. Mer-Thane 500 is a multi-layer, Pedestrian Decking System designed for use on above grade horizontal plywood, concrete or other approved substrates, consisting of: reinforcing metal lath (when installed over plywood), Mer-Thane 300SC Primer, Mer-Thane 500 Waterproofing Membrane, Aggregate #20 Silica Sand, Mer-Thane Aggregate R, Mer-Thane 300R urethane topcoat.

B. Mer-Thane 500 Functional Criteria:

1. General:

- a. A minimum finished roof deck slope of 2% (1/4 unit vertical in 12 units horizontal) is required for proper drainage to either a drip edge metal flashing or deck drain having an attachment/receiver flange.
- b. Minimum No. 26 gage bonderized steel or equivalent flashing is installed around the perimeter.
- c. The use of Stainless steel requires scuffing with 100-120 grit sand paper.
- d. The use of copper perimeter flashings is not approved.
- e. Through deck penetrations are required to be flashed and or sealed.
- f. Building code conformance: The construction shall be acceptable for use under the building code in force in the jurisdiction of the project.
- g. Concrete control joints should coincide with stress relief concentration points, with a maximum spacing of 20 ft (6.1 m).

2. Performance Requirements

a. Membrane

Test	Method	Results
Elongation	ASTM D412	900-1100%
Hardness	ASTM D2240	61-67 Shore A
Tear Resistance	ASTM D624	205-225 pli
Tensile Strength	ASTM D412	1400-1600 psi

b. Topcoat

Elongation	ASTM D412	200-300%
Hardness	ASTM D2240	85-95
Tear Resistance	ASTM D624	350-450 pli
Tensile Strength	ASTM D412	3700-4300 psi

1.5 SUBMITTALS

- A. General: Submit Samples, Certificates in accordance with Division 1 General Requirements Submittal Section.
- B. Samples: Submit samples for approval. Samples shall be of materials specified and of suitable size as required to accurately represent each color and texture used on project. Prepare each sample using same tools and techniques for actual project application. Maintain and make approved samples available at job site.
- C. Manufacturer's Warranty: Submit sample copies of Manufacturer's Warranty indicating Single Source Responsibility.

1.6 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer: Shall have marketed waterproof pedestrian walking and roof deck systems in the United States for at least ten years and Shall have completed projects of same building size and type as this project.
2. Applicator: Shall have attended a Mer-Ko Educational Seminar for installation of system and shall be currently listed and possess a certificate of attendance.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver Mer-Ko Mer-Thane 500 system products in original packaging with manufacturer's identification.
- B. Storage: Store materials supplied by Mer-Ko in a cool, dry location, out of sunlight, protected from weather and other harmful environment, and at a temperature above 65°F (18°C) and below 70°F (21°C) in accordance with manufacturer's instructions.

1.8 PROJECT / SITE CONDITIONS

A. Mer-Thane 300SC Primer

1. Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising, and remain so for a minimum of 24 hours thereafter.
2. Substrate Temperature: Do not apply Mer-Ko materials to substrates whose temperature are below 40°F (4°C) or contain frost or ice.

B. Mer-Thane 500 Membrane

1. Installation Ambient Air Temperature: Minimum of 20°F (-6.66°C) and rising, and remain so for a minimum of 24 hours thereafter.
2. Substrate Temperature: Do not apply Mer-Thane 500 to substrates whose temperature are below 20°F (-6.66°C) or contain frost or ice.

C. Mer-Thane 300R Topcoat

1. Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising, and remain so for a minimum of 24 hours thereafter.
2. Substrate Temperature: Do not apply Mer-Ko materials to substrates whose temperature are below 40°F (4°C) or contain frost or ice.

D. Inclement Weather: Do not apply Mer-Ko materials during inclement weather, unless appropriate protection is employed.

E. Sunlight Exposure: Avoid, when possible, installation of the Mer-Ko materials in direct sunlight during high temperatures. Application in direct sunlight during hot weather may adversely affect aesthetics.

F. Mer-Ko materials shall not be applied if ambient temperature exceeds 120°F (49°C) or falls below 40°F (4°C) within 24 hours of application.

G. Prior to installation, the surface shall be inspected for contamination, or other defects that may adversely affect the performance of the Mer-Ko materials and shall be free of moisture.

1.9 COORDINATION AND SCHEDULING:

- A. Coordination: Coordinate Mer-Ko Mer-Thane 500 system installation with other construction operations.

1.10 WARRANTY

- A. Warranty: Upon request, at completion of installation, provide Mer-Ko Limited Warranty. See Mer-Ko Application Guide for Warranty Schedule.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: ParexLahabra, Inc., 4125 E. LaPalma Ave., Suite 250, Anaheim, CA 92807
- B. Components: Obtain components of Mer-Ko Mer-Thane 500 system from authorized distributors. No substitutions or additions of other materials are permitted without prior written permission from ParexLahabra for this project.

2.2 MATERIALS

- A. Crack and Joint Filling:
 - 1. Mer-Thane 500 Waterproofing Membrane: Two-component, fast setting, fast curing, solvent free, high solids urethane elastomeric coating.
 - 2. Mer-Ko Fiber Tape: Strong, durable, flexible fiberglass mesh tape.
- B. Flashing Primer:
 - 1. Mer-Thane 300SC Primer: Two-component, epoxy polyamine primer

-OR-

 - 1. Mer-Thane 300: Solvent free, low odor, two-component, 100% solids, epoxy polyamine primer.
- C. Waterproof Membrane
 - 1. Mer-Thane 500 Waterproofing Membrane: Single-component, solvent free, aromatic elastomeric urethane membrane.
 - 2. Membrane Slurry Aggregate: #20 Silica Sand
 - 3. Mer-Thane Aggregate R: 16/30 mesh rubber aggregate.
- D. Topcoat's:
 - 1. Mer-Thane 300R Topcoat: Single-component, moisture-cured, liquid-applied, urethane topcoat.
 - 2. Mer-Thane Accelerator T (Optional): Single-component, accelerator designed to speed the moisture cure.

2.3 RELATED MATERIALS AND ACCESSORIES

- A. Substrate Materials: Substrate shall be installed in accordance with its industry standards and applicable building code.
 - 1. Plywood
 - a. Shall be a minimum 5/8 inch thick (16mm) exterior grade, PS 1, exposure one, plywood, complying, and installed in accordance with, 2006 or 2009 International Building Code with all edges blocked.
 - b. Face plies must be perpendicular to the supports.
 - c. The plywood must be attached to all blocking and end bearings with countersunk wood screws, screw or ring-shank nails equivalent to 8d common nails, spaced 4 inches (102 mm) on center at sheet perimeters and 8 inches (203.2mm) on center in the field, or as otherwise required by the applicable building code, whichever is more restrictive.
 - d. Plywood boards are spaced a minimum 1/8 inch.
 - e. Metal lath reinforcement: Minimum 1.75 lb/sq.yd. Galvanized Expanded Metal.
 - f. Metal lath fasteners Minimum 5/8" leg, 3/4" crown, 16 ga. corrosion resistant staples, spaced no more than 6 inches in any direction with 2 staples per LFT crossing the seams.
 - 2. Concrete
 - a. Surfaces must be clean, sound and provide a uniform surface free of depressions and ridges.
 - b. Prepare concrete surfaces using a power sprayer, grinder or shot blast as required to produce a clean, sound substrate.
 - c. All holes must be cleaned and filled with an appropriate Mer-Ko Underlayment. All high spots must be removed by chipping or grinding.
 - d. Concrete control joints should coincide with stress relief concentration points, with a maximum spacing of 20 ft (6.1 m).
 - 3. Flashing: Refer to Division 07 Flashing Section for flashing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify project site conditions under provisions of Section 01 00 00.
- B. Substrate Examination: Examine prior to System installation as follows:
 - 1. Substrate shall be free of dust, dirt, laitance, efflorescence, and other harmful contaminants.
 - 2. Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes.
- C. Advise Contractor of discrepancies preventing installation of the Mer-Ko Mer-Thane 500 System. Do not proceed with the Mer-Ko Mer-Thane 500 System work until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Protection: Protect surrounding material surfaces and areas during installation of system.
- B. Clean surfaces thoroughly prior to installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 MIXING

- A. Mix Mer-Ko proprietary products in accordance with manufacturer's instructions.

3.4 APPLICATION

- A. General: Installation shall conform to this specification and Parex Mer-Ko written instructions and drawing details.

3.5 CLEAN-UP

- A. Removal: Remove and legally dispose of Mer-Ko Mer-Thane 500 system component debris material from job site.
- B. Clean Coating surfaces and work area of foreign materials resulting from operations.

3.6 PROTECTION

- A. Provide protection of installed materials from water infiltration into or behind them.
- B. Provide protection of installed deck from dust, dirt, precipitation, and freezing during installation.
- C. Provide protection of installed finish from dust, dirt, precipitation, freezing and continuous high humidity until fully cured and dry.
- D. Clean exposed surfaces using materials and methods recommended by the manufacturer of the material or product being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Project Designer/Owner.

END OF SECTION

Disclaimer This guide specification is intended for use by a qualified designer. The guide specification is not intended to be used verbatim as an actual specification without appropriate modifications for the specific use intended. The guide specification must be integrated into and coordinated with the procedures of each design firm, and the requirements of a specific project.

NOTES



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Corporate Office
ParexLahabra, Inc.
4125 E. La Palma Avenue, Suite 250
Anaheim, CA 92807

(714) 778-2266
(866) 516-0061
infomer-ko@parexlahabra.com
www.parexmer-ko.com

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