



Auto Deck 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™ Auto Deck is a multi-layer, cementitious elastomeric decking system that provides seamless, waterproofing membrane, Vehicular Decking system designed for use on above grade concrete.

Auto Deck system is installed using the following components:

- Cementitious Primer (two component)
- Emulsion
- Cold Fluid Waterproofing Membrane
- Reinforcing fabrics
- Cementitious Bodycoat (two component)
- Emulsion
- Primer
- Urethane Topcoat
- Skid-Resistance Aggregate

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Installation of multi-layer cementitious and water-based, elastomeric decking and roofing system designed for use over properly prepared new or existing concrete substrates.
 1. Related Work: Substrate; 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 03 00 00 - Cast In Place Concrete
- B. Section 03 05 00 - Underlayment
- C. Section 07 62 00 - Sheet Metal Flashing and Trim
- D. Section 07 90 00 - Joint Protection

1.3 REFERENCE

- A. AATCC 9642 – Aspergillus Niger Fungus and Micro-Organism Resistance
- B. ANSI A118.10 – Load Bearing, Bonded, Waterproof Membranes for Thin-set Ceramic Tile and Dimension Stone Installation
- C. ANSI A118.12 – Specifications for Crack Isolation Membranes for Thin-set Ceramic Tile and Dimension Stone Installation
- D. ASTM C109 – Standard Test Method for Compressive Strength of Hydraulic Cement Mortars
- E. ASTM C482 – Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste
- F. ASTM C734 – Standard Test Method for Low-Temperature Flexibility of Latex Sealants After Artificial Weathering
- G. ASTM D638 – Standard Test Method for Tensile Properties of Plastics
- H. ASTM D570 – Standard Test Method for Water Absorption of Plastics
- I. ASTM D751 – Standard Test Methods for Coated Fabrics
- J. ASTM D1204 – Standard Test Method for Linear Dimensional Changes of Non-rigid Thermoplastic Sheeting or Film at Elevated Temperature
- K. ASTM D2047 – Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine
- G. ASTM D4060 – Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
- H. ASTM G23 – Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials

1.4 SYSTEM DESCRIPTION

- A. Description of Dual Pro 380:

Auto Deck is multi-layer cementitious and water-based, elastomeric decking and roofing system designed for use over properly prepared new or existing concrete substrates, consisting of: ARC Membrane Filler, Auto Deck Waterproof Membrane, Synthetic Burlap Perimeter-Reinforcing Fabric, Fibrous Polyester Horizontal-Reinforcing Fabric, a Bodycoat, Primer and Topcoat Sealer.
- B. Auto Deck Functional Criteria:
 - 1. General:
 - a. A minimum roof deck slope of 2% (1/4 unit vertical in 12 units horizontal) is required for proper drainage to either a double drip edge metal flashing or dual 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. Copper drain flashing-devices are required to be isolated through the use of a self adhering-peel and stick fabric-faced elastomeric membrane.
 - f. Through deck penetrations are required to be flashed and or sealed.
 - g. Building code conformance: The construction shall be acceptable for use under the building code in force in the jurisdiction of the project.
 - h. Concrete control joints should coincide with stress relief concentration points, with a maximum spacing of 20 ft (6.1 m).

2. Performance Requirements

a. Deck Wearing Surface

Test	Method	Results
Abrasion Resistance	ASTM D4060 C-17 Wheel, 1,000 gram load for 1,000 cycles	0.001 gram loss
Accelerated Aging	ASTM G23	2000 hours, No visual signs of failure
Coefficient of Friction	ASTM D2047	0.08
Compressive Strength	ASTM C109	3,500 psi
Elongation	ASTM D638	0.22 ft./ft.
Indentation Characteristics	MIL-D-3134, Para. 3.9, 4.7.4	Complies
Membrane Value		No seepage under water-heads to 115 ft
Tensile Strength	ASTM D638 (Glassmat reinforced)	>450 psi

b. Physical Characteristics 310SF/310 Topcoat

VOC Content	ASTM D2369-81	2 g/L
Hardness	ASTM D2240, Shore A	75-85
Tear Resistance	ASTM D624, Die C	300-400 PLI
Elongation	ASTM D412	450-550%
Solids Content (% by Weight)	ASTM D2369	99.8%
Solids Content (% by Volume)	ASTM D2697	99.8%
Specific Gravity		1.2
Tensile Strength		1,900-2,500 psi

1.5 SUBMITTALS

- A. General: Submit Samples, Evaluation Reports and 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 Auto Deck 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 40°F (4°C) and below 100°F (38°C) in accordance with manufacturer's instructions.

1.8 PROJECT / SITE CONDITIONS

- A. Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising, and remain so for a minimum of 24 hours thereafter.
- B. Substrate Temperature: Do not apply Mer-Ko materials to substrates whose temperature are below 40°F (4°C) or contain frost or ice.
- C. Inclement Weather: Do not apply Mer-Ko materials during inclement weather, unless appropriate protection is employed.
- D. 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.
- E. 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.
- F. 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 Auto Deck 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 Auto Deck 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. Joint Filling:
 - 1. Mer-Ko PUC 1000 Sealant: One-part, gun-grade, non-sag, non-staining polyurethane sealant, used to fill concrete control joints.
- B. Primer Coat
 - 1. Mer-Ko ARC Membrane Filler: Portland cement and sand based material, two component-requiring ARC Emulsion
- C. Base Flashing - Reinforced Waterproofing Membrane
 - 1. Mer-Ko Auto Deck Waterproofing Membrane: Asphalt modified latex, elastomeric waterproofing membrane reinforced with fabric.
 - 2. Mer-Ko Type III, 10" woven synthetic burlap fabric: Standard vertical to horizontal transition reinforcement.
- D. Horizontal Surface/Base Flashing – Reinforced Waterproof Membrane
 - 1. Mer-Ko Auto Deck Waterproofing Membrane: Asphalt modified latex, elastomeric waterproofing membrane reinforced with fabric.
 - 2. Mer-Ko Type III, 40" woven synthetic burlap fabric: Standard horizontal reinforcement.

- E. Bodycoat
 - 1. Mer-Ko Auto Deck Bodycoat: Portland cement, sand and polymer additive based blend used in conjunction with Auto Deck Emulsion.
- F. Primer
 - 1. Mer-Thane 300SC Primer: Two-component, epoxy polyamine primer.
 - OR-
 - 1. Mer-Thane 300E Primer: Two-component, epoxy polyamine primer.
- G. Topcoat:
 - 1. Mer-Thane 310 SF Membrane Topcoat: Solvent free, aromatic elastomeric urethane membrane.
 - OR-
 - 1. Mer-Thane 310 Topcoat: Solvent free, aromatic elastomeric urethane membrane.
 - 2. Optional Mer-Thane Accelerator T: Single-component, accelerator designed to speed the cure of Mer-Thane 310SF/310 Topcoats.
- H. Skid-Resistance
 - 1. Mer-Thane Aggregate RF: washed, dry, rounded crystal silica sand, 16/30 mesh or larger.

2.3 RELATED MATERIALS AND ACCESSORIES

- A. Substrate Materials: Substrate shall be installed in accordance with its industry standards and applicable building code.
 - 1. 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 Auto Deck System. Do not proceed with the Mer-Ko Auto Deck 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 Auto Deck 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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