

SECTION 07185

TRAFFIC MEMBRANE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Traffic membrane, consisting of welded seam PVC waterproofing, over the following surfaces:
 - 1. Balcony decks and roof decks.
 - 2. Walkways, ramps, and stairways.
 - 3. Patios and courtyards.

1.2 RELATED SECTIONS

- A. Section 07620 - Sheet Metal Flashing and Trim: Scuppers, counterflashings, and fascias.
- B. Section 07710 - Manufactured Roof Specialties: Scuppers, counterflashings, and fascias.
- C. Section 15146 - Plumbing Specialties: Roof drains, deck drains.

1.3 REFERENCES

- A. CAN/ULC-S107 - Standard Methods of Fire Tests of Roof Coverings; National Standard of Canada.
- B. CCMC - Technical Guide for PVC Sheet Waterproofing (Exposed to Light Pedestrian Traffic); National Research Council, Canada Construction Materials Centre (CCMC).
- C. CGSB 37-GP-54 M - Roofing and Waterproofing Membrane, Sheet Applied, Flexible, Polyvinyl Chloride; Canadian General Standards Board.
- D. CGSB 37-GP-55M - Application of Sheet Applied Flexible Polyvinyl Chloride Roofing Membrane; Canadian General Standards Board.
- E. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
- F. ICBO - Acceptance Criteria for Walking Decks; ICBO Evaluation Service, Inc. (ICBO-ES).

- G. UBC Std 15-2 - Test Standard for Determining the Fire Retardancy of Roof-covering Materials; International Conference of Building Officials.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's specifications, including data substantiating compliance with physical properties specified.
- C. Shop Drawings: Installation and seaming plan, showing joints, termination details, and interface with other materials.
- D. Samples: Two 8-1/2 by 11 inch (210 by 250 mm) pieces showing finish, pattern, color, and backing; labelled.
- E. Manufacturer's printed installation instructions and recommendations, including precautions required for seaming and adhering membrane.
- F. Installer's Qualifications.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in providing products of the type specified in this section, with minimum of 15 years documented experience with products in use.
- B. Installer Qualifications: Trained and currently certified by manufacturer.
- C. Pre-installation Meeting: Discuss waterproofing practices and precautions applicable to this project.
 - 1. Convene minimum of 7 days prior to start of installation.
 - 2. Require the attendance of:
 - a. Manufacturer's representative.
 - b. Contractor's field superintendent.
 - c. Installation foreman.
 - d. Other trades affected by this work.
 - e. Owner's representative.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact.
 - 1. Label uncured materials, both sheets and canned goods, with date of manufacturer and shelf life.
 - 2. Do not use creased or damaged sheets.
 - 3. Do not use products after end of shelf life.

- B. Store and handle materials to prevent damage.
 - 1. Place materials on pallets.
 - 2. Prevent creasing of rolled materials.
 - 3. Do not use polyethylene to cover stored materials (canvas tarpaulins are acceptable).
 - 4. Keep containers closed, except when removing materials from them.

- C. Keep materials at temperature between 40 degrees F (4.4 degrees C) and 80 degrees F (26.6 degrees C); if adhesives are exposed to lower temperature, verify useability with manufacturer before using.

1.7 WARRANTY

- A. Provide membrane manufacturer's 5 year warranty, covering water-tightness, materials, and replacement labor.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Provide products of Ensurco Duradek (US) Ltd., 404 E. 13th Avenue, North Kansas City, MO 64116. ASD. Tel: (816) 421-5830. Fax: (816) 421-2924.

- B. Manufacturer: Provide products of Ensurco Duradek (Canada) Limited, 202-8173 128 Street, Surrey, BC V3W 4G1 Canada. ASD. Tel: (604) 591-5594. Fax: (604) 591-3100.

- C. Requests for substitution will be considered in accordance with provisions of Section 01600.

- D. Substitutions: Not permitted.

2.2 MATERIALS

- A. Traffic Membrane: Ensurco Duradek Ultra; polyester reinforced PVC membrane with ultra-violet resistance, for

fully-adhered installation with heat-welded seams and perimeter attachment.

1. Sheet Width: 54 inches (1371.5 mm).
2. Overall Sheet Thickness: 0.060 inch (1.5 mm).
3. PVC Film Thickness: 0.050 inch (1.3 mm).
4. Weight: 50 oz/sq yd (1695 g/sq m).
5. Color: Ultra Classic Sandstone.
6. Color: Ultra Classic Steel.
7. Color: As selected by Architect.
8. Coefficient of Friction:
 - a. Dry leather: 0.66.
 - b. Dry rubber: 0.81.
 - c. Wet leather: 0.68.
 - d. Wet rubber: 0.73.
9. Color: Ultra Supreme Granite.
10. Color: Ultra Supreme Taupe.
11. Color: As selected by Architect.
12. Coefficient of Friction:
 - a. Dry leather: 0.53.
 - b. Dry rubber: 0.89.
 - c. Wet leather: 0.62.
 - d. Wet rubber: 0.92.
13. Color: Ultra Reflections Seascape (gray).
14. Color: Ultra Reflections Sandscape (beige).
15. Color: Ultra Reflections Landscape (green).
16. Color: Ultra Marble Mocha.
17. Color: Ultra Surcoseal Grey.
18. Color: Ultra Surcoseal Beige.
19. Color: As selected by Architect.
20. Coefficient of Friction:
 - a. Dry leather: 0.44.
 - b. Dry rubber: 1.09.
 - c. Wet leather: 0.50.
 - d. Wet rubber: 1.0.
21. Flammability (ASTM E 108 and UBC Std 15-2): Class A, when installed over non-combustible substrate.
22. Flammability (CAN/ULC-S107): Class A, when installed over non-combustible substrate.
23. Comply with CAN/CGSB-37-GP-54M.
24. National Building Code of Canada Compliance: Comply with National Building Code of Canada 1995, Part 9, Clause 9.26.2.1(1)(h), and CCMC Technical Guide for PVC Sheet Waterproofing (Exposed to Light Pedestrian Traffic), as evidenced by current Evaluation Report prepared by National Research Council, Canada Construction Materials Centre (CCMC).

- 25. CMHC Approval: Approved by Canada Mortgage and Housing Corporation for use in construction financed or insured under the National Housing Act.
 - 26. Uniform Building Code Compliance: Comply with 1994 Uniform Building Code requirements for walking decks and ICBO Acceptance Criteria for Walking Decks, as evidenced by current Evaluation Report prepared by ICBO Evaluation Service (ICBO-ES).
- B. Surface Conditioners, Adhesives, Sealants, Fillers, and Cleaners: As specified or provided by membrane manufacturer.
 - C. Perimeter Fasteners: Mechanical fastening devices furnished by membrane manufacturer; color coordinated to membrane color.
 - D. Trim, Termination Bars, and Adjacent Flashings: Specified in other sections; installed by others.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work and conform to membrane manufacturer's requirements.
- B. Verify that deck is:
 - 1. Secure, well supported, solid, and in accordance with local code structural requirements.
 - 2. Clean and smooth, free of depressions, waves, and projections, properly sloped to drains, valleys, or eaves.
 - 3. Dry and free of ice and snow.
- C. Verify that adjacent precast deck members are flush within 1/4 inch (6 mm) vertical variation, with grout keys filled flush.
- D. Notify the Architect of any conditions that would prevent satisfactory completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Do not proceed with installation until substrate preparation is complete.
- B. Coordinate timing of installation to avoid construction traffic over completed traffic membrane surfaces.
- C. Wood Deck: Fill joints, knot holes, voids, and low areas with filler and sand smooth.
- D. Wood Deck: Cover with cementitious board meeting requirements of Class A approved application.
- E. Concrete Deck: Fill surface imperfections and variations with leveling compound. Test for and remove surface contaminants.
- F. Coordinate installation with installation of drains and similar accessories.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions, applicable codes, and CGSB-37-GP-55M.
- B. Do not install when temperature is below 25 degrees F (minus 3.8 degrees C) or above 98 degrees F (36.6 degrees C). Do not install when winds are gusting over 30 mph (48.3 kph).
- C. Do not dilute primers, adhesives, coatings, or sealants.
- D. Install membrane with minimum number of seams possible. Overlap seams 3/4 inch (19 mm), to shed water; heat-weld all seams.
- E. Adhere membrane to substrate.
- F. Mechanically fasten all perimeter edges and penetrations.
- G. Install flashings and accessories. Seal around all penetrations, drains, and edges.

3.4 ADJUSTING AND CLEANING

- A. Clean soiled areas in accordance with manufacturer's recommendations.
- B. Repair damaged areas to match original materials.

3.5 PROTECTION

- A. Protect finished work from traffic using durable temporary materials.

END OF SECTION