ICC-ES Evaluation Report

ESR-2413

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 18 13—Pedestrian Traffic Coatings

REPORT HOLDER:

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EVALUATION SUBJECT:

DECTEC SELECT WALKING DECK AND ROOF MEMBRANE

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- Other Codes (see Section 8.0)

Properties evaluated:

- Durability
- Wind uplift resistance
- Impact resistance

2.0 USES

The DecTec Select membrane is used as a covering in walking deck and nonclassified roof covering systems over concrete or plywood substrates.

3.0 DESCRIPTION

3.1 General:

The DecTec Select walking deck and roof covering system consists of a membrane and deck adhesive installed over a concrete or plywood substrate.

3.2 Membrane:

The DecTec Select membrane is a PVC membrane with an internal polyester reinforcement. The membrane is produced in a nominally 0.060-inch [60 mils (1.5 mm)] thickness and in rolls measuring 76 inches (1930 mm) wide by 100 or 600 feet (30.5 or 182.9 m) long. The membrane meets requirements for PVC roofing and waterproofing membranes based on testing in accordance with CAN/CGSB 37.54.

3.3 Adhesives:

3.3.1 DecTec WBA 100: DecTec WBA 100 is a water-based latex adhesive for use with the DecTec Select membrane over plywood substrates. The adhesive is supplied in 2.5-gallon (9.5 L) containers and has a shelf life of one year when stored in the original container at temperatures between 40°F and 80°F (4.4°C and 26.7°C).

3.3.2 DecTec SBA 100: DecTec SBA 100 is a solvent-based adhesive for use with the DecTec Select membrane over concrete or plywood substrates. The adhesive is supplied in 5-gallon (18.9 L) and 1-gallon (3.78 L) containers and has a shelf life of one year when stored in the original container at temperatures between 40°F and 80°F (4.4°C and 26.7°C).

3.4 Substrates:

3.4.1 Plywood: Minimum $^5/_8$-inch-thick (15.9 mm) exterior-grade with tongue-and-groove edges, complying with United States Department of Commerce Product Standard PS-1.

3.4.2 Concrete: Concrete substrates must comply with the requirements of the applicable code.

3.5 Impact Resistance:

The DecTec Select walking deck and roof membrane described in this report meets requirements for impact resistance based on testing in accordance with FM 4470.

4.0 INSTALLATION

4.1 General:

Installation of the DecTec Select walking deck and roof covering system must be in accordance with the manufacturer's published installation instructions, the applicable code and this report. The manufacturer's installation instructions must be available on the jobsite during application. Installation is limited to conditions where the weather is dry and the ambient air temperature is a minimum of 50°F (10°C) when using the DecTec WBA 100 adhesive or 34°F (1°C) when using the DecTec SBA 100 adhesive. Materials must not be applied if precipitation is occurring or expected.

4.2 Preparation of Substrates:

Substrates must be structurally sound, clean and dry, and must be sloped a minimum of $^1/_4$ inch per foot (2 percent slope).

4.2.1 Plywood: Plywood must be applied to framing in accordance with the requirements of the applicable code. All unsupported edges must be blocked. All penetrations through and terminations of the sheathing must be

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protected with metal flashing in accordance with the requirements of the applicable code and the manufacturer's published installation instructions.

4.2.2 Concrete: Surfaces must be clean and free of standing water. All holes, joints and cracks must be pointed flush with portland cement mortar and all high spots cut or ground off to provide a smooth, even surface. Any foreign material such as paint, grease or oil must be removed by mechanical means.

4.3 Membrane Installation:

The membrane must be adhered to the substrate with either DecTec WBA 100 adhesive (for plywood substrates) or DecTec SBA 100 adhesive (for plywood or concrete substrate). Only an area that can be completely covered in the same day's operations is to be coated with adhesive. All seams at edges and ends are hot-air welded. The adhesive must not be applied to seams or other areas to be hot-air welded.

The WBA 100 adhesive must be applied at a rate of 0.70 gallon per 100 ft^2 (11.6 to 14 m^2 per L) to the plywood substrate in accordance with the manufacturer's published installation instructions.

The SBA 100 adhesive must be applied to both the substrate and the underside of the membrane in accordance with the manufacturer's published installation instructions. The adhesive must be applied at a rate of 1 gallon to 1.25 gallons per 100 ft^2 (0.4 to 0.5 L per m^2) to the plywood or concrete substrate. When the adhesive is completely dry, the underside of the membrane must be coated with the adhesive at a rate of 0.50 gallon per 100 ft^2 (0.2 L/m^2). The adhesive on the underside of the membrane must not be allowed to dry completely before the membrane is rolled onto the substrate.

4.4 Wind Resistance:

The allowable wind uplift pressures for the DecTec Select walking deck and roof covering membrane are noted in Table 1.

4.5 Method of Repair

The damaged area must be clean and dry, and all existing damaged membrane removed. The membrane must be replaced in the same manner as described in Section 4.3.

5.0 CONDITIONS OF USE

The DecTec Select walking deck and roof covering membrane described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. If there is a conflict between the installation instructions and this report, this report governs.

5.2 The membrane must be installed only by contractors registered with Skyline Building Systems, Inc.

5.3 The deck on which the membrane is installed must be designed to resist the design wind pressures of the applicable code.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Walking Decks (AC39), dated March 2010.

7.0 IDENTIFICATION

Each roll of membrane is identified with the report holder's name (Skyline Building Systems, Inc.) and address, the product name, the date of manufacture and the evaluation report number (ESR-2413).

Each container of adhesive is labeled with the report holder's name (Skyline Building Systems, Inc.) and address, the product name, the batch number keyed to the date of manufacture, and the product expiration date.

8.0 OTHER CODES

In addition to the codes referenced in Section 1.0, the products described in this report were found to comply with the requirements of the following codes:

- BOCA® *National Building Code/*1999 (BNBC)
- 1999 *Standard Building Code*® (SBC)
- 1997 *Uniform Building Code*™ (UBC)

Sections 2.0 through 7.0 apply to compliance with the above-noted codes as well as the IBC and IRC.

TABLE 1—WIND UPLIFT RESISTANCE

SYSTEM NO.	ALLOWABLE WIND UPLIFT (psf)	SUBSTRATE	MEMBRANE	ADHESIVE & APPLICATION
1	135	$^5/_8$-inch plywood	DecTec Select	DecTec WBA 100 at 0.7 gal per square to the substrate only
2	630	Structural concrete	DecTec Select	DecTec SBA 100 in a 2-sided application at 1.25 gal per square on the substrate and 0.5 gal per square on the membrane underside for a combined rate of 1.75 gal per square.

For **SI:** 1 inch = 25.4 mm; 1 psf = 48 Pa; 1 square = 9.29 m^2.