# Code Compliance Research Report
# CCRR-0395

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**DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION**
**Section: 07 18 13 – Pedestrian Traffic Coatings**
**Section: 07 54 19 – Polyvinyl-Chloride PVC Roofing**

**REPORT HOLDER:**
**IB Roof Systems**
**506 East Dallas Road, Suite 300**
**Grapevine, TX 76051**

**REPORT SUBJECT:**
**DeckShield™ Walking Deck and Roofing Membrane**

## 1.0 SCOPE OF EVALUATION

**1.1.** This research report addresses compliance with the following Codes:

- 2024, 2021, 2018 *International Building Code®* (IBC)
- 2024, 2021, 2018 *International Residential Code®* (IRC)
- 2023 *Florida Building Code* (FBC), including HVHZ (see Section 9.0)

Note: This report references the most recent edition of the Codes cited. Section numbers in earlier editions may differ.

**1.2.** DeckShield™ has been evaluated for the following properties (see Table 1):

- Physical Properties
- Wind Resistance
- Fire Classification

**1.3.** DeckShield™ has been evaluated for the following uses:

- As a walking surface applied to a wood deck substrate
- As a roofing surface applied to combustible and non-combustible substrates

## 2.0 STATEMENT OF COMPLIANCE

DeckShield™ complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in section 6.0.

## 3.0 DESCRIPTION

DeckShield™ is a calendared poly vinyl chloride (PVC) film that is laminated to a non-woven polyester fabric. The membrane is printed and embossed with a variety of patterns and colors. The tri-laminate membrane weighs approximately 54 ounces per square yard and is nominally 60 mils thick.

The roofing membrane is adhered to wood, cement board, or concrete substrates with one of the following adhesives:

- ITW Miracle V206 Vinyl Decking Adhesive
- Bostik Pliobond 7008 Adhesive
- IB Water Borne Adhesive
- Bostik Pliobond 1746
- Holcim FA636 (aka Duro-Last WB II)
- Holcim LA432M (aka Duro-Last SB IV)
- ICP Choice Adhesives V4554.

## 4.0 PERFORMANCE CHARACTERISTICS

**4.1.** DeckShield™ complies with ASTM D4434, Type II.

**4.2.** Class A roof covering and walking deck when installed over concrete, or minimum 1/2-inch gypsum sheathing complying with ASTM C1177, or 1/2-inch DensDeck Roof Board.

**4.3.** Class C roof covering and walking deck when installed over minimum 15/32-inch plywood deck.

**4.4.** Wind Uplift resistance as described in Section 5.2 of this report.

**4.5.** DeckShield™ complies with the requirements of FM 4470, Resistance to Foot Traffic test.

## 5.0 INSTALLATION

**5.1. General:** DeckShield™ must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

Substrates must be structurally sound and in accordance with applicable Code. Surface shall be dry and free from all debris with installation being limited to time periods where precipitation is not expected.

Flashing shall be installed in accordance with applicable Codes, must be applied to all door thresholds, jambs, fascia, and walls.

Subsequent sheets of membrane are installed with a 1 inch overlap and melted together with an approved heat gun and nozzle. A seam roller is used to bond the two surfaces together.

DeckShield™ must be installed with one of the adhesives identified in Section 3.0. The adhesives must be applied in accordance with the manufacturer's published installation instructions. See Table 3 for application requirements.

Repairs to the membrane require that the damaged film be cut and removed. Application of the patch is as described in Section 5.3.

**5.2. Wind Uplift Resistance:** See assemblies described in Table 2.

## 6.0 CONDITIONS OF USE

**6.1.** Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

**6.2.** Use of DeckShield™ as a walking deck is limited to a level walking surface.

**6.3.** Wind uplift pressure based upon nominal wind speed ($V_{asd}$) on any roof area, including edge and corner zones, must not exceed the allowable wind uplift pressure for the system installed in that particular roof area.

**6.4.** DeckShield™ is manufactured under a quality program with inspections by Intertek Testing Services NA, Inc.

## 7.0 SUPPORTING EVIDENCE

**7.1.** Reports of tests demonstrating compliance with UL 1897-15, Uplift Tests for Roof Covering Systems.

**7.2.** Fire classification testing demonstrating compliance with ASTM E108-20a Standard test Methods for Fire Tests of Roof Coverings.

**7.3.** Reports of tests demonstrating compliance with FM 4470-2016, Resistance to Foot Traffic.

**7.4.** Data in accordance with the ICC-ES AC39, Acceptance Criteria for Walking Decks, approved June 2017.

**7.5.** Reports of testing demonstrating compliance with ASTM D4434-21 Standard Specification for Poly (Vinyl Chloride) Sheet Roofing.

## 8.0 IDENTIFICATION

DeckShield™ is identified with the company name, IB Roof Systems, the address and telephone number, the product name DeckShield™, the Intertek Mark as shown below, and the Code Compliance Research Report number (CCRR-0395).

CODE COMPLIANCE
Intertek
CCRR-0395

The adhesives are supplied in unopened containers labeled with the adhesive company's name, product name, and application instructions.

## 9.0 FLORIDA BUILDING CODE

The DeckShield™ membrane, described in Sections 2 through 8 of this report, complies with the *Florida Building Code – Building* and *Florida Building Code – Residential*, subject to the following conditions:

Installation shall be in accordance with Section 5 of this report except as follows:

The DeckShield™ membrane is adhered to 0.5-in. Georgia Pacific DensDeck Prime boards, which are attached to minimum 19/32-in.-thick plywood using one of the following fasteners at a density of one fastener per square foot:

- OMG Inc.: OMG XHD & OMG 3-in Galvalume Steel Plate
- SFS Group USA, Inc.: Dekfast DF-#15-PH3 & Dekfast PLT-R-3

The membrane is adhered to the DensDeck substrate with ITW Miracle Decking Adhesive (V206), applied to both the substrate and membrane at 1 gal/60 ft$^2$, or with Ashland

Pliodeck 7008 or IB Water Borne Adhesive, applied to the substrate at 1 gal/160 $ft^2$.

The allowable design pressure for this assembly is 60 psf.

**10.0 CODE COMPLIANCE RESEARCH REPORT USE**

**10.1.** Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

**10.2.** Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

**10.3.** Reference to the Intertek website address: bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

**TABLE 1 – PROPERTIES EVALUATED**

| PROPERTY | APPLICABLE CODE SECTIONS[1] | | | |
|---|---|---|---|---|
| | IBC | IRC | FBC - Building | FBC - Residential |
| Physical Properties | 104.2.3, 1507.12 | R104.2.2.4, R905.12 | 104.11, 1504.6, 1507.12 | R104.11, R905.13 |
| Wind Resistance | 1504.4 | R301.2.1 | 1504.3 | R301.2 |
| Fire Classification | 1505 | R902 | 1505 | R902 |
| Impact | 1504.7 | N/A | 1504.7 | N/A |
| HVHZ | N/A | N/A | 1523.6 | R4402 |

[1]Section numbers are applicable for the most recent Code cited in Section 1.1.

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**TABLE 2 – WIND RESISTANCE (IBC/IRC)**

| ROOF DECK | ROOF COVERING | ADHESIVE | ALLOWABLE WIND UPLIFT RESISTANCE (psf) |
|---|---|---|---|
| Min. 1/2-in. ASTM C1177 sheathing mechanically attached to plywood sheathing with No 12 by 1-5/8-in. self-drilling pan head screws with 3-in.-diameter galvanized steel roofing plates spaced 16 inches on center through the sheathing to framing. Plywood sheathing is attached to framing in accordance with the applicable code. | DeckShield™ | ITW Miracle Decking Adhesive (V206) applied to both substrate and membrane at 1 gal/60 $ft^2$, or Asland Pliodeck 7008 or IB Water Borne Adhesive applied to the substrate at 1 gal/160 $ft^2$ | 30 |
| Concrete | DeckShield™ | ITW Miracle Decking Adhesive (V206) applied to both substrate and membrane at 1 gal/60 $ft^2$, or Asland Pliodeck 7008 or IB Water Borne Adhesive applied to the substrate at 1 gal/160 $ft^2$ | 120 |
| Plywood sheathing attached to framing in accordance with the applicable code | DeckShield™ | ITW Miracle Decking Adhesive (V206) applied to both substrate and membrane at 1 gal/60 $ft^2$, or Ashland Pliodeck 7008 or IB Water Borne Adhesive applied to the substrate at 1 gal/160 $ft^2$ | 145 |

**TABLE 3 – ADHESIVE APPLICATION**

| ADHESIVE | APPLICATION RATE |
|---|---|
| ITW Miracle V206 Vinyl Decking Adhesive | Applied to both substrate and membrane at 120 $ft^2$/gal, sufficient to bond 60 ft2/gal of membrane |
| Bostik Pliodeck 7008 | Applied to the substrate at 150-165 $ft^2$/gal |
| IB Water Borne Adhesive | Applied to the substrate at 160 $ft^2$/gal |
| Bostik Pliobond 1746 | Applied to both substrate and membrane at 100 - 120 $ft^2$/gal, sufficient to cover 50 – 70 $ft^2$/gal |
| Holcim FA636 (Duro-Last WB II) | Applied to the substrate at 100 - 120 $ft^2$/gal |
| Holcim LA432M (Duro-Last SB IV) | Applied to both substrate and membrane at 120 $ft^2$/gal |
| ICP Choice Adhesives V4554 | Applied to both substrate and membrane at 100 - 120 $ft^2$/gal, minimum 2.0 g/$ft^2$ when dry |