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

REPORT HOLDER:

AVM INDUSTRIES, INC.

EVALUATION SUBJECT:

ELASTO FIBERDECK 100 WALKING DECK SYSTEM

1.0 EVALUATION SCOPE

Compliance with the following codes:


Properties evaluated:

- Durability
- Fire resistance
- Fire classification
- Wind Resistance

2.0 USES

The Elasto Fiberdeck 100 system is a cementitious walking and roof covering deck system for use directly over concrete and plywood substrates.

3.0 DESCRIPTION

3.1 Materials:

3.1.1 Metal Flashing: Metal flashing must be a minimum No. 26 gage (19 mils) (0.019 inch (0.483 mm)), corrosion-resistant metal. Flashings must be rigid enough to avoid excessive deflection and ponding, or must be solidly backed by a plywood or concrete substrate.

3.1.2 AVM Crete 6400 Underlayment: AVM Crete 6400 underlayment is a field mixture of AVM Aggregate 400 and AVM Concrete Additive 7400, job-site-mixed at a ratio of 50 pounds (22.5 kg) of AVM Aggregate 400 to 1 gallon (3.7 L) of AVM Concrete Additive 7400.

3.1.2.1 AVM Aggregate 400: AVM Aggregate 400 is a dry blend of portland cement and various aggregates, and is packaged in 50-pound (22.5 kg) bags.

3.1.2.2 AVM Concrete Additive 7400: AVM Concrete Additive 7400 is a liquid polymer to be used with AVM Aggregate 400, and is supplied in 1- and 5-gallon (3.7 and 18.9 L) containers. Shelf life is one year when stored in unopened containers at temperatures between 50°F and 90°F (10°C and 32.2°C).

3.1.3 AVM Primer 100: AVM Primer 100 is a primer for plywood, concrete and steel surfaces, and is supplied in 2- and 5-gallon (7.6 and 18.9 L) containers. Shelf life is one year when stored in unopened containers at temperatures between 50°F and 90°F (10°C and 32.2°C).

3.1.4 AVM Mat 100: AVM Mat 100 is a multidirectional, chopped-strand, fiberglass mat weighing 0.75 ounce per square foot (229 g/m²).

3.1.5 AVM Base Resin 100: AVM Base Resin 100 is a liquid polymer bonding resin, and is supplied in 2- and 5-gallon (7.6 and 18.9 L) containers. Shelf life is one year when stored in unopened containers at temperatures between 50°F and 90°F (10°C and 32.2°C).

3.1.6 AVM Texture 100: AVM Texture 100 is a premixed, ready-to-use texture coating, and is supplied in 2- and 5-gallon (7.6 and 18.9 L) containers. Shelf life is one year when stored in unopened containers at temperatures between 50°F and 90°F (10°C and 32.2°C).

3.1.7 AVM Top Coat Sealer 4100 and 4150: AVM Top Coat Sealers 4100 and 4150 are integral-color or clear-topcoat, acrylic system sealers, and are supplied in 2- and 5-gallon (7.6 L and 18.9 L) containers. Shelf life is one year when stored in unopened containers at temperatures between 50°F and 90°F (10°C and 32.2°C).

3.1.8 AVM AcriPatch 5020: AVM AcriPatch 5020 is a patching compound for application at joints, voids, cracks and wood knots, and is available in 2- and 5-gallon (7.6 L and 18.9 L) containers. Shelf life is one year when stored in unopened containers at temperatures between 50°F and 90°F (10°C and 32.2°C).

3.2 Substrates:

3.2.1 Plywood: Plywood must have a minimum thickness of 5/8 inch (15.9 mm) or as required by Table 2304.8 (3) of the 2015 IBC [Table 2304.7 (3) of the 2012, 2009 and 2006 IBC], and must be exterior grade complying with U.S. DOC PS-1 or PS-2.

3.2.2 Concrete: Concrete decks must comply with the applicable requirements of the applicable code and must have a minimum compressive strength of 2500 psi (17.2 MPa) after a minimum 28-day cure time.

3.3 Metal Lath:

Metal lath must be minimum 2.5-pound-per-square-yard...
4.0 INSTALLATION

4.1 General:
The Elasto Fiberdeck 100 walking deck system must be installed 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. All liquid materials must be applied when the ambient temperature is between 50°F and 90°F (10°C and 32.2°C), and the relative humidity is between 30 and 85 percent; the materials must not be applied when rain or other precipitation is expected or occurring.

Substrates must be structurally sound, clean and dry, and must be sloped to meet the minimum requirements of the applicable code.

4.2 Preparation of Substrates:

4.2.1 Plywood: Plywood must be applied to framing in accordance with the requirements of the applicable code. All edges must be blocked. All penetrations through and terminations of the sheathing must be protected with metal flashing in accordance with the requirements of the applicable code and the manufacturer's published installation instructions. Any loose or spalling materials must be removed, and all plywood seams, knot holes and uneven areas must be filled with AVM AcrylicPatch 5020.

4.2.2 Concrete: Surfaces must be clean and dry. All holes and cracks must be filled with AVM AcrylicPatch 5020, and all high spots cut or ground off to provide a smooth, even surface. Dust must be removed using high-pressure air. Any foreign material such as paint, grease or oil must be removed by mechanical means. New concrete must be mechanically scarified prior to application of the system.

4.2.3 Metal Flashing: Metal surfaces must be cleaned of all dust, grease, oils, loose paints, etc., to ensure a good bond between AVM materials and metal flashing. All exposed joints must be caulked.

4.3 Walking Deck Covering System:

4.3.1 Installation over Plywood Substrates: The substrate must have a minimum slope of 1/4:12 (2 percent slope).

The plywood must be prepared as noted in Section 4.2.1. All perimeter edges, penetrations, and abutting vertical surfaces must be covered with metal flashing that extends a minimum of 2 inches (51 mm) onto the surface. The system materials must be applied directly to metal flashing.

AVM Primer 100 is applied by roller or brush at a rate of 1 gallon per 200 to 300 square feet (0.021 to 0.14 L/m²). This coat requires 15 to 45 minutes to cure; temperature and humidity affect drying rates. The primer must be reapplied if the AVM Primer 100 is not allowed to cure until dry, which requires approximately 1 to 3 hours; temperature and humidity affect drying rates.

The deck must be cleaned, and AVM Top Coat Sealer 4100 or 4150 is applied at the rate of 1 gallon per 100 to 120 square feet (0.41 to 0.34 L/m²). This coat must be allowed to cure until dry, but under no circumstances is curing to be less than 24 hours; temperature and humidity affect drying rates.

4.3.2 Installation over Concrete Substrates: Concrete decks must have a minimum slope of 1/4:12 (2 percent slope) and must be prepared in accordance with Section 4.2.2 with metal flashing prepared as noted in Section 4.2.3. All perimeter edges, penetrations, and abutting vertical surfaces must be covered with metal flashing that extends a minimum of 2 inches (51 mm) onto the vertical surface, except where edges of concrete slabs are intended for drainage. The system materials must be applied directly to the metal sections. Installation over
concrete substrates must be as described in Section 4.3.1 with the exception that the metal lath is not required. In the case of installations over existing reinforced concrete slabs exceeding 1 inch (25.4 mm) in thickness and having a minimum compressive strength of 2,500 psi (17.2 MPa), the application of AVM Crete 6400, as detailed in Section 4.3.1, is not required.

4.4 Method of Repair:
The damaged area must be cleared of all existing material, and the materials replaced in the manner described in Sections 4.1, 4.2 and 4.3. When substrate damage occurs, the retention of the fire-resistance rating and strength properties must be investigated and the results submitted to the code official.

4.5 One-hour Fire-resistance-rated Floor Assembly:
The Elasto Fiberdeck 100 walking deck system, when installed over 5/8-inch-thick (15.9 mm) exterior-grade plywood complying with PS-1, with nominally 2-by-8 lumber joists (51 by 203 mm) spaced at a maximum of 16 inches (406 mm) on center, and all plywood joints blocked, is a substitute for the double wood floor described in Assembly 13 of Table 721.1 (3) of the 2012 IBC [Table 720.1(3) of the 2009 and 2006 IBC]. When installation is over nominally 2-by-8 joists (51 by 203 mm), the design bending stress assigned to the joists is limited to 78 percent of the code-prescribed design values. The reduction in bending stress is not required for 2-by-10 (51 by 254 mm) and deeper joists.

4.6 Fire classification:
When the Elasto Fiberdeck 100 system is applied over 5/8-inch-thick (15.9 mm), exterior grade plywood substrates with all edges blocked, the system has a Class A roof assembly classification, provided the slope is a maximum 1/4 inch per foot (2% slope) and meets the minimum slope requirements of the applicable code.

4.7 Wind Resistance:
The maximum allowable wind resistance pressure is limited by the capacity of the plywood or concrete roof deck construction, as applicable. The roof deck must be designed to resist the design wind pressures in accordance with the applicable code.

5.0 CONDITIONS OF USE
The Elasto Fiberdeck 100 walking deck system 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 manufacturer's published installation instructions and this report, this report governs.

5.2 When installation is adjacent to swimming pools or spas, in areas subject to related chemical exposure, a second application of AVM Top Coat Sealer 4100 or 4150 is required and must be applied in accordance with Section 4.3.1, except that the sealer is applied at a rate of 1 gallon per 150 square feet (0.27 L/m²).

5.3 The roof deck on which the Elasto Fiberdeck 100 walking deck system is installed must be designed to resist the design wind pressures of the applicable code.

5.4 The AVM products are manufactured in Canoga Park, California, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED
Data in accordance with the ICC-ES Acceptance Criteria for Walking Decks (AC39), dated October 2013 (Editorially revised December 2016).

7.0 IDENTIFICATION
7.1 Each bucket of AVM materials bears a label noting the manufacturer's name (AVM Industries, Inc.) and address; the product name, the evaluation report number (ESR-2125); the shelf life; the batch number keyed to the date of manufacture. Each bag of AVM materials bears a label noting the manufacturer's name (AVM Industries, Inc.) and address; the product name, the evaluation report number (ESR-2125); the shelf life; the batch number keyed to the date of manufacture. Each pallet of buckets and bags bears the same label, including the evaluation report number. Rolls of AVM Mat 100 bear a label noting the company name (AVM Industries), the AVM Mat 100 product name and the evaluation report number (ESR-2125).

7.2 The report holder's contact information is the following:

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

REPORT HOLDER:
AVM INDUSTRIES, INC.

EVALUATION SUBJECT:
ELASTO FIBERDECK 100 WALKING DECK SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:
The purpose of this evaluation report supplement is to indicate that the Elasto Fiberdeck 100 Walking Deck System, recognized in ICC-ES evaluation report ESR-2125, has also been evaluated for compliance with the codes noted below.

Applicable code editions:
- 2014 Florida Building Code—Building
- 2014 Florida Building Code—Residential

2.0 CONCLUSIONS

The Elasto Fiberdeck 100 Walking Deck System, described in Sections 2.0 through 7.0 of the evaluation report ESR-2125, complies with the Florida Building Code—Building and the Florida Building Code—Residential, provided the design and installation are in accordance with the 2012 International Building Code® (IBC) provisions noted in the evaluation report.

Use of the Elasto Fiberdeck 100 Walking Deck System for compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code—Building and the Florida Building Code—Residential has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 9N-3, verification that the report holder’s quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued July 2020.