



## ICC-ES Evaluation Report

Reissued April 2022

### ESR-3672

This report is subject to renewal April 2024.

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**

**Section: 07 18 13—Pedestrian Traffic Coatings**

**REPORT HOLDER:**

**DECK COATING PRODUCTS, INC. (DECK FLEX)**

**EVALUATION SUBJECT:**

**DECK FLEX WALKING DECK AND ROOF COVERING SYSTEMS**

#### 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2021, 2018, 2015, 2012, 2009, and 2006 *International Building Code*® (IBC)
- 2021, 2018, 2015, 2012, 2009, and 2006 *International Residential Code*® (IRC)

For evaluation for compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see [ESR-3672 LABC and LARC Supplement](#)

**Properties evaluated:**

- Durability
- Impact Resistance
- Wind Resistance
- Fire Classification
- Fire Resistance

#### 2.0 USES

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System are intended for use as walking decks and classified roof coverings applied over plywood decks. The systems, when installed as described in Section 4.3, are used as a Class A or Class B roof covering. The Deck Flex W.M. Fire Retardant System, when installed as described in Section 4.5, is used as a component of a one-hour fire-resistance-rated assembly.

#### 3.0 DESCRIPTION

##### 3.1 General:

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System are produced at jobsites

and consist of the components in Sections 3.1.1 through 3.1.8.

**3.1.1 TetraCrete No. 2 (TC2) :** A proprietary dry mixture of white cement and silica sand No. 60 used for the texture coat. The material is available in 50-pound (22.7 kg) bags and may be used as long as the product has not hardened.

**3.1.2 TetraCrete No. 3 (TC3):** A proprietary dry mixture of Portland cement and silica sand, maximum 20 mesh used for the cementitious layer in the Deck Flex W.M. Fire Retardant System. The material is available in 50-pound (22.7 kg) bags and may be used as long as the product has not hardened.

**3.1.3 TetraCrete Additive:** A liquid acrylic emulsion to be mixed with TetraCrete No. 2 (TC2) to make the texture coat of Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System, and with TetraCrete No. 3 (TC3) in preparing the cementitious layer of the Deck Flex W.M. Fire Retardant System. The material is available in one-, two- and five-gallon (3.8, 7.6 and 18.9 L) pails and has a shelf life of one year from the date of manufacture when stored in unopened containers.

**3.1.4 Fiberglass Mat:** The fiberglass mat provided in rolls 50 inches (1270 mm) wide and weighs <sup>3</sup>/<sub>4</sub> ounce per square yard (25.4 g/m<sup>2</sup>).

**3.1.5 Deck Flex Base Coat (DFB):** A liquid acrylic polymer latex used as a base coat to waterproof existing plywood substrates. The material is available in one-, two- and five-gallon (3.8, 7.6 and 18.9 L) pails and has a shelf life of one year when stored in unopened containers.

**3.1.6 Deck Flex Texture Coat:** A mixture of TetraCrete No. 2 (TC2), color pigment (when required) and TetraCrete Additive, mixed to a pasty consistency at the jobsite in a ratio of 45 to 50 pounds (20.4 to 22.7 kg) of TetraCrete No. 2 (TC2) to one gallon (3.8 L) of TetraCrete Additive. Deck Flex Texture Coat is used as the second layer of the Deck Flex W.F. Fire Retardant System and the third layer of the Deck Flex W.M. Fire Retardant System.

**3.1.7 Deck Flex Top Coat (DFT):** A liquid acrylic polymer latex used to protect waterproofing layers beneath the system and to create the desired color. It is available in one-, two- and five-gallon (3.8, 7.6 and 18.9 L) pails and

has a shelf life of one year when stored in unopened containers.

**3.1.8 Deck Flex Patching Compound:** A mixture of base coat and powdered aggregates in a specific ratio. Deck Flex Patching Compound is used to patch cracks and to provide a prepared surface for application of the Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System. The material is available in one-, two- and five-gallon (3.8, 7.6 and 18.9 L) pails and has a shelf life of one year when stored in unopened containers.

#### 4.0 Installation:

##### 4.1 Preparation of Substrates:

All substrates must be free of contaminants such as water, curing compounds, hardeners, bond breakers, paint, etc. Substrates must be structurally sound, free of any projections or depressions, and sloped for proper drainage. Plywood must be a minimum of  $\frac{5}{8}$  inch (15.9 mm) thick with all joints over framing members or blocked with minimum 2-by-4 blocking.

##### 4.2 Application of Deck Flex Systems:

**4.2.1 Deck Flex W.M. Fire Retardant System:** The Deck Flex W.M. Fire Retardant System must be installed over exterior-grade plywood substrates using a 2 $\frac{1}{2}$ -pound-per-square-yard (1.36 kg/m<sup>2</sup>) galvanized metal lath. The  $\frac{5}{8}$ -inch-thick (15.9 mm) plywood deck is prepared as described in Section 4.1 and the metal lath is fastened over the plywood with no overlapped joints. Fasteners must be No. 16 gage staples having a 1-inch (25.4 mm) crown and  $\frac{5}{8}$ -inch-long (15.9 mm) legs, and must be applied at the rate of approximately 22 to 24 staples per square foot (236 to 258 staples/m<sup>2</sup>).

Forty-five to fifty pounds (20.4 to 22.7 kg) of TetraCrete No. 3 (TC3) are mixed with 1 gallon (3.7 L) of TetraCrete Additive, and the mixture is troweled into the metal lath for a maximum coverage of 50 square feet (4.6 m<sup>2</sup>), ensuring that all holes in the metal lath are covered, resulting in a minimum thickness of  $\frac{1}{8}$  inch (3.2 mm) over metal lath. The mixture must be applied at an ambient temperature from 45°F to 100°F (7.2°C to 37.7°C) with a cure time of 24 hours. After curing, surface irregularities are removed and patching compound applied as necessary.

The fiberglass mat is then laid and Deck Flex base coat applied using a roller or brush at a rate of 60 to 75 square feet per gallon (1.5 to 1.8 m<sup>2</sup>/L), resulting in a dry thickness of  $\frac{1}{16}$  inch (1.6 mm). After the base coat has dried for two to four hours, depending on weather, Deck Flex Texture Coat is spray-applied at a rate of 90 to 100 square feet per gallon (2.2 to 2.4 m<sup>2</sup>/L). After one to two hours of drying, Deck Flex top coat is applied, using roller or brush, at a rate of 150 to 180 square feet per gallon (3.7 to 4.4 m<sup>2</sup>/L).

The Deck Flex W.M. coating system, applied as described above on a deck having a maximum slope of  $\frac{1}{4}$  inch to a horizontal foot (2.1% slope), has a Class A roof classification.

**4.2.2 Deck Flex W.F. Fire Retardant System:** Deck Flex W.F. Fire Retardant System is a coating system for use, without metal lath, over exterior-grade plywood substrates. The  $\frac{5}{8}$ -inch-thick-plywood (15.9 mm) deck must be prepared in accordance with Section 4.1. All joints must be covered with 1 $\frac{3}{4}$ -inch-wide-by-0.16-inch-thick (44.5 mm by 4.1 mm) galvanized steel metal seams. Two coats of patching compound are then applied over the metal seams.

A fiberglass mat is laid on the plywood deck, and Deck Flex base coat applied over it, using roller and brush, at a rate of 60 to 75 square feet per gallon (1.5 to 1.8 m<sup>2</sup>/L)

resulting in a dry thickness of  $\frac{1}{16}$  inch (1.6 mm). After the base coat has dried for two to four hours, Deck Flex Texture Coat must be troweled on at the rate of 70 to 85 square feet per gallon (1.7 to 2.1 m<sup>2</sup>/L), resulting in a dry thickness of  $\frac{1}{16}$  inch (1.6 mm).

Deck Flex Texture Coat is then spray-applied at the rate of 90 to 100 square feet per gallon (2.2 to 2.4 m<sup>2</sup>/L). When the texture coat is dry (one to two hours), Deck Flex topcoat must be applied at the rate of 150 to 180 square feet per gallon (3.7 to 4.4 m<sup>2</sup>/L).

The Deck Flex W.F. coating system, applied as described above on a deck having a maximum slope of  $\frac{1}{4}$  inch to a horizontal foot (2.1% slope), has a Class B roof classification.

##### 4.3 Fire Classification:

**4.3.1 Deck Flex W.M. Fire Retardant System:** When applied as described in Section 4.2.1 on a plywood deck having a maximum slope of  $\frac{1}{4}$  inch to a horizontal foot (2.1 percent slope), the system has a Class A roof classification.

**4.3.2 Deck Flex W.F. Fire Retardant System:** The Deck Flex W.F. Fire Retardant System, When applied as described in Section 4.2.2 on a plywood or concrete deck having a maximum slope of  $\frac{1}{4}$  inch to a horizontal foot (2.1 percent slope), the system has a Class B roof classification.

##### 4.4 Wind Resistance:

Under the 2021 and 2018 IBC, the Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System may be used in areas subject to a basic wind speed (V) of 130 mph (209 km/h) on structures with a maximum height of 40 feet (12,192 mm) in Exposure B areas.

Under the 2021 IRC, 2018 IRC, 2015 IBC, 2015 IRC, and 2012 IBC, the Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System may be used in areas subject to an ultimate design wind speed (V<sub>ult</sub>) of 130 mph (209 km/h) on structures with a maximum height of 40 feet (12,192 mm) in Exposure B areas.

Under the 2012 IRC, 2009 IBC, 2009 IRC, 2006 IBC, and 2006 IRC, the Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System may be used in areas subject to a maximum 3-second gust wind speed (V<sub>3s</sub>) of 100 mph (161 km/h) on structures with a maximum height of 40 feet (12,192 mm) in Exposure B areas.

##### 4.5 One-hour Fire-resistance-rated Construction:

When the Deck Flex W.M. Fire Retardant System is installed in accordance with Sections 4.1 and 4.2 over  $\frac{5}{8}$ -inch-thick (15.9 mm) exterior-grade plywood complying with PS-1, with nominally 2-by-10 wood joists spaced at a minimum of 16 inches (406 mm) on center, and all plywood joists blocked, the assembly can be recognized as an alternative for the double wood floor described in Item 13-1.4 of Table 721.1(3) of the 2021, 2018, 2015 and 2012 IBC [Table 720.1(3) of the 2009 and 2006 IBC], except that the  $\frac{1}{2}$ -inch-thick Type X gypsum wallboard must be replaced with  $\frac{5}{8}$ -inch-thick Type X gypsum wallboard. The design bending stress must be limited to 78 percent of the code prescribed design values for the wood joist.

#### 5.0 CONDITIONS OF USE

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System described in this report comply with, or are suitable alternatives to what is

specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The systems must be installed in accordance with this report, the applicable code, and the manufacturer's installation instructions, by an approved applicator trained by Deck Flex. In the event of conflict between this report and the manufacturer's installation instructions, this report governs.
- 5.2 The products are manufactured in Huntington Beach, 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 June 2017 (editorially revised November 2020).

## 7.0 IDENTIFICATION

All components of the Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System must be identified with a label bearing the Deck Flex name and address; the product name, the shelf life and date of manufacture, if applicable; and the evaluation report number (ESR-3672).

- 7.1 The report holder's contact information is the following:

**DECK COATING PRODUCTS, INC. (DECK FLEX)**  
**5722 RESEARCH DRIVE, UNIT A**  
**HUNTINGTON BEACH, CALIFORNIA 92649**  
**(888) 929-8624**  
[www.deckflex.com](http://www.deckflex.com)

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

**REPORT HOLDER:**

**DECK COATING PRODUCTS, INC. (DECK FLEX)**

**EVALUATION SUBJECT:**

**DECK FLEX WALKING DECK AND ROOF COVERING SYSTEMS**

**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System, described in ICC-ES evaluation report [ESR-3672](#), have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

**Applicable code editions:**

- 2020 *City of Los Angeles Building Code* (LABC)
- 2020 *City of Los Angeles Residential Code* (LARC)

**2.0 CONCLUSIONS**

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System, described in Sections 2.0 through 7.0 of the evaluation report [ESR-3672](#), comply with the LABC, and the LARC, and are subject to the conditions of use described in this supplement.

**3.0 CONDITIONS OF USE**

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-3672](#).
- The design, installation, conditions of use and identification of the Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System are in accordance with the 2018 *International Building Code*® (IBC) provisions or the 2018 *International Residential Code*® (IRC) provisions, as applicable, noted in the evaluation report [ESR-3672](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 15, 16 and 17 or LARC Chapter 9, as applicable.
- The installation of Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System must comply with the City of Los Angeles Information Bulletin P/BC 2020-16, "Dwellings in High Wind Velocity Areas (HWA)."

This supplement expires concurrently with the evaluation report, reissued April 2022.

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**Section: 07 18 13—PEDESTRIAN TRAFFIC COATINGS**

**REPORT HOLDER:**

**DECK COATING PRODUCTS, INC. (DECK FLEX)**

**EVALUATION SUBJECT:**

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**1.0 REPORT PURPOSE AND SCOPE**

**Purpose:**

The purpose of this evaluation report supplement is to indicate that Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System, described in ICC-ES evaluation report ESR-3672, have also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 *California Residential Code* (CRC)

**2.0 CONCLUSIONS**

**2.1 CBC:**

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System, described in Sections 2.0 through 7.0 of the evaluation report ESR-3672, comply with CBC Chapter 15, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 15, 16 and 17, as applicable.

**2.1.1 OSHPD:**

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.1.2 DSA:**

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

**2.2 CRC:**

The Deck Flex W.M. Fire Retardant System and the Deck Flex W.F. Fire Retardant System, described in Sections 2.0 through 7.0 of the evaluation report ESR-3672, comply with CRC Chapter 9, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 9, as applicable.

This supplement expires concurrently with the evaluation report, reissued April 2022.