

ICC-ES Evaluation Report

ESR-1365

Reissued April 2024

This report also contains:


- LABC Supplement

Subject to renewal April 2026

- FBC Supplement

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

Copyright © 2024 ICC Evaluation Service, LLC. All rights reserved.

| | | | |
|--|--|--|---|
| <p>DIVISION: 06 00 00— WOOD, PLASTICS AND COMPOSITES</p> <p>Section: 06 05 83— Shop-Applied Wood Coatings</p> <p>Section: 06 16 00— Sheathing</p> | <p>REPORT HOLDER: LOUISIANA-PACIFIC CORPORATION</p> | <p>EVALUATION SUBJECT: LP® FLAMEBLOCK® FIRE-RATED SHEATHING</p> |  |
|--|--|--|---|

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015 and 2012 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015 and 2012 [International Residential Code® \(IRC\)](#)

For evaluation for compliance with codes adopted by the [Los Angeles Department of Building and Safety \(LADBS\)](#), see [ESR-1365 LABC and LARC Supplement](#).

Properties evaluated:

- Structural
- Surface-burning characteristics
- Durability
- Thermal barrier
- Component of fire-resistance-rated assemblies
- Wind uplift assemblies

2.0 USES

LP® FlameBlock® Fire-Rated Sheathing (includes the former Blazeguard® Fire-Rated Sheathing) is used as floor sheathing, roof sheathing, wall sheathing, an interior finish, a thermal barrier and a component of a fire-resistance-rated assembly.

3.0 DESCRIPTION

3.1 General:

The products described in this report are composite panels consisting of a layer of Pyrotite® coating at a minimum thickness of 0.045 inch (1.1 mm) that is factory bonded to either oriented strand board (OSB) or plywood complying, respectively, with US DOC PS2 or US DOC PS1. The Pyrotite® coating is an inert, inorganic fire-shield that meets the non-combustibility requirements of 2021, 2018, 2015 and 2012 IBC Section 703.5.1. The Pyrotite® layer is applied to one or both faces of the OSB or plywood.

There are two methods for factory laminating the Pyrotite® coating as specified in the approved quality control documentation and manufacturing standards.

- Method 1: A layer of cured coating is laminated to the wood structural panel. The Pyrotite® coating mixture is formed and cured into separate sheets which are then factory bonded to wood structural panels by adhesive or mechanical attachments.
- Method 2: A layer of coating directly laminated to the wood structural panel. The Pyrotite® coating mixture is directly applied to the wood structural panel creating a natural bond during the curing process.

The products are typically available in sizes from 4 feet by 8 feet (1219 mm by 2438 mm) up to 8 feet by 24 feet (2438 mm by 7315 mm), and in nominal thicknesses of $\frac{3}{8}$ inch (9.5 mm) to $1\frac{1}{8}$ inch (28.6 mm).

3.2 Product Numbers, Names and Descriptions:

3.2.1 15382-1: LP® FlameBlock® Fire-Rated Sheathing—Adhesively or Mechanically Applied on Plywood: A layer of cured Pyrotite® coating is attached with adhesive or mechanically fastened to a minimum $\frac{3}{8}$ Performance Category plywood substrate.

3.2.2 15382-2: LP® FlameBlock® Fire-Rated Sheathing—Adhesively or Mechanically Applied on Oriented Strand Board (OSB): A layer of cured Pyrotite® coating is attached with adhesive or mechanically fastened to a minimum $\frac{3}{8}$ Performance Category OSB substrate.

3.2.3 15382-3: LP® FlameBlock® Fire-Rated Sheathing—Directly Applied on Plywood: The Pyrotite® coating is directly applied to a minimum $\frac{3}{8}$ Performance Category plywood substrate.

3.2.4 15382-7: LP® FlameBlock® Fire-Rated OSB Sheathing—Directly Applied on Oriented Strand Board (OSB): The Pyrotite® coating is directly applied $\frac{3}{8}$ Performance Category OSB substrate.

3.2.5 15382-10: LP® FlameBlock® Plus Fire-Rated OSB Sheathing, Directly Applied on Oriented Strand Board (OSB): The Pyrotite® coating is directly applied to a minimum $\frac{3}{8}$ Performance Category OSB substrate.

4.0 DESIGN AND INSTALLATION

4.1 General:

The panels must be installed in accordance with the manufacturer's published literature and the requirements for wood structural panels in Chapter 23 of the IBC, or Sections R604 and R803.2 of the IRC.

The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation.

If there are any conflicts between the manufacturer's instructions and this report, this report governs.

4.2 Applications:

The panels may be installed in the following applications:

- a) Roof sheathing on buildings of Type III, IV and V construction for a distance of 4 feet (1220 mm) on both sides of a fire wall to provide continuity [IBC Section 706.6, Exception 4.3, and 2021 and 2018 IRC Section R302.2.4 Exception (2015 and 2012 IRC Section R302.2.2(2) Exception)]. The panels must be installed with the Pyrotite® layer facing the interior of the building.
- b) Exterior walls and roof sheathing on buildings of Type I and II construction, as described in 2021, 2018, 2015 and 2012 IBC Section 603.1, Subsection 1. The Pyrotite® layer must be laminated to both sides of the panels.
- c) Wall sheathing for exterior walls in buildings of Type III construction with a two-hour rating or less. The Pyrotite® layer must be laminated to each side of the panels and the studs must be of noncombustible material or fire-retardant-treated wood.
- d) Class A interior finish material for walls and ceilings of Type V construction (IBC Section 803). The panels must be installed with the Pyrotite® layer facing the interior of the building.
- e) Thermal barrier for separating foam plastic insulation from the interior of a building (IBC Section 2603.4). The panels must be installed with the Pyrotite® layer facing the interior of the building.
- f) Component of fire-resistance-rated construction (IBC Section 703). Refer to Section 4.4 of this report.

4.3 Structural Design: The structural design of LP® FlameBlock® Fire-Rated Sheathing shall be in accordance with IBC and IRC, and with the current APA Engineered Wood Construction Guide (E30), based

on the Performance Category and grade (Sheathing or Structural I Sheathing) of the OSB or plywood substrate as shown in [Table 1](#) of this report.

4.4 Fire-resistance-rated Wall Assemblies:

For the fire-resistance-rated wall assembly described in Section 4.4.1, screws complying with ASTM C1002 may be substituted for the specified nails, provided the screws are of equal length and head diameter as that specified for the nails and must not exceed the nail spacing for attachment of the gypsum wallboard.

4.4.1 Two-hour Exterior Wall Assembly, Fire Exposure from Either Side:

The wall assembly must be constructed as follows:

a) Wall Framing:

- Minimum nominal 2-inch-by-6-inch wood studs spaced a maximum 16 inches (406 mm) on center, with two top plates and one bottom plate.

b) Interior Wall Sheathing:

- Two layers of $\frac{5}{8}$ -inch-thick (15.88 mm), 4-foot-wide (1.2 m), Type X gypsum wallboard installed vertically. Except at wall plates, horizontal joints of the base layer of wallboard must be blocked unless horizontal joints of the face layer of wallboard are staggered a minimum of 12 inches (305 mm). The face layer must be installed with vertical joints staggered a minimum of 16 inches (406 mm) from the base layer.

Attached base layer of wallboard to studs with minimum 6d, cup-head drywall nails $1\frac{7}{8}$ -inch-long (47.63 mm), with 0.0915-inch (2.32 mm) shank diameters and $\frac{1}{4}$ -inch (6.35 mm) head diameters, spaced maximum 6 inches (152 mm) on center along all studs, blocking and plates.

Attached face layer of wallboard to studs with minimum 8d, cement-coated, cup-head drywall nails $2\frac{3}{8}$ -inch-long (60.33 mm), with 0.113-inch (2.87 mm) shank diameters and $\frac{9}{32}$ -inch (7.14 mm) head diameters, spaced maximum 8 inches (203 mm) on center along all studs, blocking and plates.

Finish exposed fastener heads and wallboard joints of face layer with two layers of gypsum compound. A minimum 2-inch-wide (51 mm) paper, plastic or fiberglass tape must be embedded in the first layer of compound over wallboard joints.

c) Insulation:

- Mineral fiber batts, faced or unfaced, with a minimum 2.7 pcf (43.3 kg/m³) nominal density to fill stud cavity. Friction-fit batts between studs, blocking, and top and bottom plates.

d) Exterior Wall Sheathing:

- One layer of 2-sided LP® FlameBlock® Fire-Rated Sheathing (product 15382-3 or 15382-7, with the Pyrotite® layer to both faces of the sheathing). Sheathing is installed vertically, with horizontal joints blocked.

Attach sheathing to studs with $1\frac{7}{8}$ -inch-long (47.63 mm), 6d sinker nails, spaced 6 inches (152 mm) on center around the perimeter of the sheathing and 12 inches (304.8 mm) on center in the field.

- One layer of $\frac{5}{8}$ -inch-thick (15.88 mm), 4-foot-wide (1219 mm), Exterior Type X gypsum wallboard installed vertically. Except at wall plates, horizontal joints of the base layer of wallboard must be blocked. The face layer must be installed with vertical joints staggered a minimum of 16 inches (406 mm) from the sheathing layer.

Attached face layer of exterior wallboard through sheathing into studs with minimum 6d, cement-coated, cup-head drywall nails $1\frac{7}{8}$ -inch-long (47.63 mm), with 0.0915-inch (2.32 mm) shank diameters and $\frac{1}{4}$ -inch (6.35 mm) head diameters, spaced maximum 6 inches (152 mm) on center along all studs, blocking and plates.

Fastener heads and exterior wallboard joints are not required to be finished.

The design axial compressive stresses for the wood stud must be calculated in accordance with Sections 3.6 and 3.7 of ANSI/AWC/AF&PA NDS and must be limited to the least of the following:

- 625 psi.
- $0.73 F'_c$.
- $0.73 F'_c$, where F'_c is calculated assuming a slenderness ratio of 21.

5.0 CONDITIONS OF USE:

The LP® FlameBlock® Fire-Rated Sheathing 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 The structural system is outside the scope of this report and must be designed in accordance with the IBC or the IRC.
- 5.2 The LP® FlameBlock® Fire-Rated Sheathing, must be covered with a wall or roof covering complying with the IBC or IRC, when installed as exterior wall or roof sheathing, respectively.
- 5.3 Use of the LP® FlameBlock® Fire-Rated Sheathing for applications other than those noted in Section 4.2 of this report is outside the scope of this report.
- 5.4 Use of the LP® FlameBlock® Fire-Rated Sheathing is limited to nonclassified roof assemblies or as a component of classified roofing assembly when specifically recognized as such in a listing approved by the code official.
- 5.5 Shear walls constructed with LP® FlameBlock® Fire-Rated Sheathing may be designed in accordance with the ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS) Section 4.3.7.1 and Table 4.3A for the Performance Category of the OSB or plywood substrate as shown in [Table 1](#) of this report.
- 5.6 LP® FlameBlock® Fire-Rated Sheathing is manufactured by Louisiana-Pacific Corporation, in Watkins, Minnesota, and in Thomasville, Alabama, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Wood Structural Panels Laminated with an Inert, Inorganic Fire Shield \(AC264\)](#), dated February 2012 (editorially revised August 2020).

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-1365) along with the name, registered trademark, or registered logo of the report holder (Louisiana-Pacific Corporation) must be included in the product label.
- 7.2 In addition, each panel covered by this report must be identified by a stamp bearing the manufacturer's name (Louisiana-Pacific Corporation), the product name, the product identification number and the manufacturer's location or mill number.

Each panel must have the grade, thickness and span rating designation for the wood structural panels visible for field identification after lamination.

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

LOUISIANA-PACIFIC CORPORATION
1610 WEST END AVENUE, SUITE 200
NASHVILLE, TENNESSEE 37203
(880) 820-3025
www.lpcorp.com
customer.support@lpcorp.com

TABLE 1 — LP® FLAMEBLOCK® FIRE-RATED SHEATHING PRODUCT DESCRIPTION¹

| LP® FLAMEBLOCK® PANEL PERFORMANCE CATEGORY | NOMINAL FINISHED PANEL THICKNESS (in.) | | NOMINAL PANEL WEIGHT ⁴ (psf) | |
|---|--|-------------------------------|---|----------------------|
| | Coated on One Side | Coated on Both Sides | Coated on One Side | Coated on Both Sides |
| 3/8 | ⁷ / ₁₆ | ¹ / ₂ | 1.9 | 2.5 |
| 7/16 | ¹ / ₂ | ⁹ / ₁₆ | 2.1 | 2.7 |
| 15/32 | ¹⁷ / ₃₂ | ¹⁹ / ₃₂ | 2.2 | 2.8 |
| 19/32 | ²¹ / ₃₂ | ²³ / ₃₂ | 2.6 | 3.2 |
| 23/32 | ²⁵ / ₃₂ | ²⁷ / ₃₂ | 3.0 | 3.6 |

For **SI**: 1 inch = 25.4 mm; 1 psf = 47.88 Pa.

¹Performance Category of the finished LP® FlameBlock® panel is based solely on the Performance Category of the OSB or plywood substrate in accordance with the US DOC Voluntary Product Standard PS 2 or US DOC Voluntary Product Standard PS 1, respectively.

²LP® FlameBlock® Fire-Rated Sheathing is manufactured standard with PS 2 Sheathing grade substrate. Structural I sheathing grade substrate may be available in certain Performance Categories. Contact your local supplier for availability.

³Nominal panel thickness is an estimate of the combined thickness of the OSB or plywood substrate and the thickness of the Pyrotite coating. The coating is applied by weight. The coating is applied by weight so finished thickness may vary.

⁴Nominal panel weight is an estimate and shall only be used for design purposes. Contact LP for actual shipping weights.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES**Section: 06 05 83—Shop-Applied Wood Coatings****Section: 06 16 00—Sheathing****REPORT HOLDER:**

LOUISIANA-PACIFIC CORPORATION

EVALUATION SUBJECT:

LP® FLAMEBLOCK® FIRE-RATED SHEATHING

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that the LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing, described in ICC-ES evaluation report [ESR-1365](#), 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:

- 2023 *City of Los Angeles Building Code* (LABC)
- 2023 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing, described in Sections 2.0 through 7.0 of the evaluation report [ESR-1365](#), comply with the LABC Chapters 15 and 23, and the LARC Sections R604 and R803.2, and are subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing, described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-1365](#).
- The design, installation, conditions of use and identification of the LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing, are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-1365](#).
- The design is in accordance with the additional requirements of LABC Chapter 16 and 23, as applicable.
- Panels must be used only in locations where combustible materials are permitted in the 2023 LABC.
- Exterior wall assemblies must be covered with an approved exterior weather resistive barrier as required per Section 1403.2 of the 2023 LABC.

This supplement expires concurrently with the evaluation report, reissued April 2024.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 05 83—Shop-Applied Wood Coatings
Section: 06 16 00—Sheathing

REPORT HOLDER:

LOUISIANA-PACIFIC CORPORATION

EVALUATION SUBJECT:

LP® FLAMEBLOCK® FIRE-RATED SHEATHING

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing, described in ICC-ES evaluation report ESR-1365, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 Florida Building Code—Building
- 2023 Florida Building Code—Residential

2.0 CONCLUSIONS

The LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing described in Sections 2.0 through 7.0 of the evaluation report ESR-1365, complies with the *Florida Building Code—Building* and the *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-1365 for the 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the LP® FlameBlock® Fire-Rated Sheathing, LP® FlameBlock® and BlazeGuard® Rated Sheathing, and LP® FlameBlock® and BlazeGuard® Structural 1 Sheathing 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 61G20-3, 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 April 2024.