

Pei Evaluation Service® is an accredited ISO Standard 17065 Product Certifier, accredited by the IAS. This **Product Evaluation Report** represents a product that **Pei ES** has Evaluated. This product has a Product Evaluation Service Agreement & Follow-up Inspection Service Agreement. This **Product Evaluation Report** in no way implies warranty for this product or relieves **Louisiana-Pacific Corporation** of their liabilities for this product. This **PER** is an official document if it is within one year of the initial or re-approval date.

Initial Approval
December, 2007

Re-Approved
April, 2020

See all **Pei ES** Listings at: www.p-e-i.com

Report Owner

Louisiana-Pacific Corporation
414 Union Street
Suite 2000
Nashville, TN 37219

Approved Manufacturing Locations

509 4th Street North Watkins, MN 55389	Louisiana-Pacific Corporation 1500 N. Clarke Industrial Rd. Thomasville, AL 36784
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Product

LP® FlameBlock™ Fire-Rated Sheathing
LP® FlameBlock™ Fire-Rated Structural 1 Sheathing
BlazeGuard® Structural Rated Sheathing
BlazeGuard® Structural 1 Sheathing

Evaluation Report Information

Louisiana-Pacific Corporation Website: lpcorp.com
Louisiana-Pacific Corporation Contact: Scott Johnson - (971) 336-0152

General Details

LP FlameBlock and **BlazeGuard Rated Sheathing** are used for roof sheathing, wall sheathing and sub flooring in Residential and Commercial construction. The sheathing is typically applied to standard dimension lumber framing.

LP FlameBlock and **BlazeGuard Structural 1 Sheathing** are used for roof, sidewall and floor sheathing in Residential and Commercial construction. The sheathing is typically applied to standard dimension lumber framing.

Product Description

LP FlameBlock and **BlazeGuard Rated Sheathing** with a **Louisiana-Pacific** proprietary coating on **One** or **Both** sides of the substrate are manufactured using APA Rated Oriented Strand Board (OSB) with a performance category of 3/8, 7/16, 19/32, or 23/32. The proprietary coating is applied with either chopped fiberglass strands or continuous fiberglass mat to one side of the OSB creating a 7/16", 15/32", 5/8", or 3/4" nominal thickness. See Table 1 for APA Equivalent Performance Category labeling requirements. Increased fastener withdrawal values are provided in Table 2, and increased structural span ratings are provided in Table 3 and Table 4.

LP FlameBlock and **BlazeGuard Structural 1 Sheathing** with a **Louisiana-Pacific** proprietary coating on **One** or **Both** sides of the substrate are manufactured using APA Structural 1 OSB or APA Rated OSB as applicable. The coating is applied with either chopped fiberglass strands or continuous fiberglass mat to the side of the OSB creating a 7/16", 15/32", 5/8" or 3/4" nominal thickness. See Table 1 for APA Equivalent Performance Category labeling requirements.

General Product Use

1. Both **Rated** and **Structural 1** Sheathings shall be installed per the APA Engineered Wood Construction Guide along with the following notes.
2. The **Rated Sheathing** shall be installed with the long side perpendicular to the framing.
3. Fasteners shall be applied using the fastening schedule that applies to APA rated OSB sheathings as shown on Table R602.3 in the 2012, 2015 & 2018 IRC along with Table 2304.9.1 in the 2012 IBC, and Table 2304.10.1 in the 2015 & 2018 IBC.
4. Load ratings and spans are as shown in Table 2, Table 3, and Table 4 of this **PER**.
5. Fire Rated assemblies, Fire Resistance and Thermal Barrier properties are outside the scope of this **PER** and shall be verified through other Evaluation reports..

Code Compliance

2012, 2015 & 2018 International Residential Code	2012, 2015 & 2018 International Building Code
R503.2	
R602.3 (2012)	Section 2303.1.4 (2012)
R602.1.8 (2015/2018)	Section 2303.1.5 (2015/2018)
R604.1	
R803.2	

- Surface Burning Characteristics - Flame Spread 5 / Smoke Development 60/ Maximum Flame Front 8.6-ft. when tested in accordance with ASTM E 2768.
- Applications that shall require the fasteners used in connection with Fire Retardant Treated Wood must adhere to IBC Section 2304.9.5 (2012), 2304.10.5 (2015/2018) and Section R317.3 for the 2012, 2015 and 2018 IRC.

Code Compliance continued

• Meets the prescriptive requirements of the 2012, 2015 & 2018 International Residential Code when fasteners are installed as per the fastener schedule noted in Table R602.3(1).

Tested to

APA Test Method S-2 Sheathing and Sturd-I-Floor Performance Under Uniform Loads.

APA PS2-10 - Performance Standard for Wood Based Structural-Use Panels

ASTM E 661-03 Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads.

ASTM D1037-12 Fastener Withdrawal Test.

ASTM D1761-12 Standard Test Methods for Mechanical Fasteners in Wood

ASTM D3043-17 - Standard Test Methods for Structural Panels in Flexure.

Department of Commerce (DOC) Voluntary Product Standard PS 2-11 - Performance Standard for Wood-Based Structural-Use Panels.

ASTM E72-05 - Standard Test Method of Conducting Strength Tests of Panels for Building Construction, Section 14 Racking Load - Evaluation of Sheathing Materials.

ASTM E84-10 (UL 723) - Standard Test Method Surface Burning Characteristics of Building Materials.

CAN/ULC-S102-10 - Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies, Seventh Edition.

ASTM E2126-11 - Standard Test Methods for Cyclic (Reversed) Load Tests for Shear Resistance of Vertical Elements of the Lateral Force Resisting Systems for Buildings.

ASTM E2768-11 - Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials (30 min Tunnel Test)

Product Labeling

Each Sheet or Bundle shipped of **LP FlameBlock** or **BlazeGuard** Sheathing, that is covered by this **PER**, must have a label attached with at least the following information:

1. Manufacturer Name
2. Date of Manufacture
3. This **PER** Number & **Pei ES** Logo
4. Load vs. Span rating or public website to ratings
5. The Third Party Inspection Agency Information
6. APA Equivalent Performance Category (See Summary in Table 1)

Table 1 - APA Equivalent Performance Category¹

APA Rated OSB Substrate			APA Structural 1 Substrate		
Base Performance Category	Coated 1-side	Coated Both Sides	Base Performance Category	Coated 1-side	Coated Both Sides
3/8 OSB	7/16 OSB [†]	7/16 Structural 1 [†]	3/8 Structural 1	7/16 Structural 1 [†]	7/16 Structural 1 [†]
7/16 OSB	15/32 OSB [†]	15/32 Structural 1 [†]	7/16 Structural 1	15/32 Structural 1 [†]	15/32 Structural 1 [†]
15/32 OSB	15/32 OSB	15/32 Structural 1 [†]	15/32 Structural 1	15/32 Structural 1	15/32 Structural 1
19/32 OSB	19/32 OSB	19/32 OSB	19/32 Structural 1	19/32 Structural 1	19/32 Structural 1
23/32 OSB	23/32 OSB	23/32 OSB	23/32 Structural 1	23/32 Structural 1	23/32 Structural 1

Notes:

1. APA equivalent performance categories are based upon current testing in accordance with APA PS 2-10. Tabulated labeling requirements are subject to change pending additional testing.

2. **FlameBlock** and **BlazeGuard Structural 1 Sheathing** may be manufactured using 3/8" or 7/16" OSB Rated Sheathing with a Barrier Technology proprietary coating on **Both** sides of the substrate. Seismic shear wall equivalency has been verified through cyclic load tests in accordance with ASTM E2126 and comparison to the nominal unit shear capacities and apparent shear stiffness from 2008 and 2015 Special Design Provisions for Wind & Seismic (SDPWS) Table 4.3A. Lateral force resisting systems shall be designed in accordance with the published design criteria (SDPWS Table 4.3A, etc.) for the equivalent performance category on the product label. See Table 1 for APA Equivalent Performance Category labeling requirements.

[†] Equivalent performance category verified as better than original base substrate through testing in accordance with APA PS 2-10.

[†] Values taken from APA Engineered Wood Construction Guide (E30W/Revised February 2016) for comparison purposes.

Acceptable Evaluation Marks



Fastener and Span Rating Tables**Table 2: Fastener Withdrawal Values for LP FlameBlock and BlazeGuard** ^{1, 2}

Product Description	Design Loads					
	1-1/4" Hand Driven Roofing Nail	1-1/4" Power Driven Roofing Nail	#10 Wood Screw	#12 Wood Screw	#14 Wood Screw	#15 Wood Screw
7/16 Performance Category OSB w/ Chopped Fiberglass	14.9 lbs.	21.2 lbs	97.0 lbs	98.6 lbs.	106.3 lbs	107.5 lbs
7/16 Performance Category OSB w/ Continuous Mat Fiberglass	16.4 lbs.	16.4 lbs.	---	---	---	---
19/32 Performance Category OSB w/ Continuous Mat Fiberglass	29.5 lbs.	26.0 lbs.	---	---	---	---

Table 3: Roof Span Rating ^{1, 2}

Description		7/16 Performance Category OSB [†]	7/16 Performance Category OSB w/ Chopped Fiberglass	7/16 Performance Category OSB w/ Mat Fiberglass	19/32 Performance Category OSB [†]	19/32 Performance Category OSB w/ Mat Fiberglass
Framing Spacing	Coated Side	Uniform psf	Uniform psf	Uniform psf	Uniform psf	Uniform psf
16" o.c.	Up	100	141	140	275	275
16" o.c.	Down	---	---	200	---	---
24" o.c.	Up	40	62	72	120	151
24" o.c.	Down	---	---	94	---	---
32" o.c.	Up	none	---	34	60	81

Table 4: Floor Span Rating ^{1, 2}

Description		19/32 Performance Category OSB [†]	19/32 Performance Category OSB w/ Mat Fiberglass
Framing Spacing	Coated Side	Uniform psf	Uniform psf
16" o.c.	Up	150	192
19.2" o.c.	Up	100	100

Notes:

1. All **Rated Sheathing** Design values and fastening schedules, as published in the APA Engineered Wood Construction Guide (E30W/Revised February 2016), should be used for **FlameBlock** or **BlazeGuard Rated Sheathing** products with a Louisiana-Pacific proprietary coating on **One** or **Both** sides of the substrate unless higher values are shown in the charts above.

2. All **Structural 1 Sheathing** Design values and fastening schedules, as published in the APA Engineered Wood Construction Guide (E30W/Revised February 2016) should be used for **FlameBlock** or **BlazeGuard Structural 1** Products with a Louisiana-Pacific proprietary coating on **One** or **Both** sides of the substrate.

Product Documentation

A Product Evaluation Service Agreement between *Pei Evaluation Service* and Louisiana-Pacific Corporation
 A Follow-up Inspection Service Agreement between *Progressive Engineering Inc.* and Louisiana-Pacific Corporation
 A Louisiana-Pacific Corporation Factory Audit Manual - Report No. 3166174SAT-006 REV. 7 - Dated: **9/27/2019**
 LP Building Products SDS for LP Engineered Wood Products with Fire-Retardant Coating - Dated: 7/24/2017
 LP Building Products Installation Instructions LPFB0127
 LP Building Products Specifications Sheet LPFB0017
 LP Building Products Technical Guide - Dated: 12/2015
 ICC-ES Evaluation Report ESR-1365, Reissued on 4/2020
 A *Pei* test report No. 2005-0132(A) - Nail Withdrawal Test - Dated: 1/7/2005, Revised: 5/8/2018.
 A *Pei* test report No. 2005-0132(B) - APA Test Method S-2 Uniform Load Comparison Tests on LP Flameblock Fire-Rated OSB Sheathing or Mulehide Mat, Mulehide Chop and 7/16" OSB - Dated: 1/19/2005, Revised: 5/8/2018.
 A *Pei* test report No. 2006-297(A) - Uniform Load Test on 7/16" & 19/32" Sheathing on 24" o.c. Framing - Re-Dry Test - Dated: 10/16/2006, Revised 5/3/2018
 A *Pei* test report No. 2006-297(B) - Uniform Load Test on 7/16" & 19/32" Sheathing on 24" o.c. Framing - Re-Dry Test - Dated: 10/16/2006, Revised 5/3/2018
 A *Pei* test report No. 2006-297(C) - Fastener Withdrawal Tests from Sheathing - Dated: 3/21/2006, Revised 5/3/18
 A *Pei* test report No. 2006-297(D) - Uniform Load Test on 7/16" & 19/32" Sheathing on 16" o.c. Framing - Dry Test - Dated: 10/16/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-297(E) - Uniform Load Test on 7/16" & 19/32" Sheathing on 16" o.c. Framing - Re-Dry Test - Dated: 10/16/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-297(G) - Concentrated Load & Impact Load Test on 7/16" & 19/32" Sheathing on 16" o.c. Framing - Dry Test - Coating Side Up - Dated: 10/16/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-297(H) - Concentrated Load & Impact Load Test on 7/16" & 19/32" Sheathing on 16" o.c. Framing - Wet Test - Coated Side Up - Dated: 10/16/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-297(I) - Concentrated Load & Impact Load Test on 7/16" & 19/32" Sheathing on 24" o.c. Framing - Dry Test - Coated Side Up - Dated: 10/16/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-1099 (A) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 32" o.c. Framing - Wet Test - Coated Side Up - Dated: 10/23/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-1099(B) - Uniform Load Test on 19/32" Sheathing on 32" o.c. Framing - Dry Test - Dated 3/2/2006, Revised 5/3/2018.
 A *Pei* test report No. 2006-1707 - APA Test Method S-2 Uniform Load Testing on 7/16" Chopped BlazeGuard (OSB) Chopped Fiberglass - Dated: 11/9/2006, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (A) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 16" o.c. Framing - Dry Test - Coated Side Down - Dated: 7/13/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (B) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 16" o.c. Framing - Dry Test - Coated Side Down - Dated: 6/25/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (C) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 16" o.c. Framing - Wet Test - Coated Side Down - Dated: 6/19/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (D) - Uniform Load Tests on 7/16" Sheathing on 24" o.c. Framing - Dry Test - Coated Side Down - Dated: 7/25/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (E) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 24" o.c. Framing - Dry Test - Coated Side Down - Dated: 7/31/2007, Revised 5/3/2018
 A *Pei* test report No. 2007-425 (F) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 24" o.c. Framing - Wet Test - Coated Side Down - Dated: 7/30/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (G) - Uniform Load Tests on 7/16" Sheathing on 32" o.c. Framing - Dry Test - Coated Side Up - Dated: 6/7/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (H) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 32" o.c. Framing - Wet Test - Coated Side Up - Dated: 6/21/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-425 (I) - Concentrated Load & Impact Load Test on 7/16" Sheathing on 32" o.c. Framing - Dry Test - Coated Side Up - Dated: 7/31/2007, Revised 5/3/2018.
 A *Pei* test report No. 2007-1160 - Wall Racking Comparison Test on 15/32" OSB "A" Sheathing vs. 15/32" OSB Dated: 9/21/2007, Revised 4/30/2018.

Product Documentation Continued

A *Pei* test report No. 2008-296 (A) - Uniform Load Tests on Mule Hide FR Deck Panel "C" 24" O.C. Framing - Dry Test - Coated Side Up - Dated: 2/26/2008, Revised 4/30/2018.

A *Pei* test report No. 2008-296 (B) - Concentrated Load & Impact Load Mule Hide FR Deck Panel "C" 24" O.C. Framing - Dry Test - Coated Side Up - Dated: 3/07/2008, Revised 4/30/2018.

A *Pei* test report No. 2008-296 (C) - Concentrated Load & Impact Load Mule Hide FR Deck Panel "C" 24" O.C. Framing - Wet Test - Coated Side Up - Dated: 3/11/2008, Revised 4/30/2018.

A *Pei* test report No. 2011-362A - DOC PS 2 Evaluation of Sheathing Materials, Racking Load using 3/8" OSB with Barrier coating - Dated: 5/3/2011, Revised 4/26/2018.

A *Pei* test report No. 2011-362B - DOC PS 2 Evaluation of Sheathing Materials, Bond Performance Testing using 3/8" OSB with Barrier coating - Dated: 5/3/2011, Revised 4/27/2018.

A *Pei* test report No. 2011-362C - DOC PS 2 Evaluation of Sheathing Materials, Dimensional Stability Testing using 3/8" OSB with Barrier coating - Dated: 5/4/2011, Revised 4/27/2018.

A *Pei* test report No. 2011-362D - DOC PS 2 Uniform Load Test using 3/8" OSB with Barrier coating. 24" o.c., Dry Test - Dated: 4/6/2011, Revised 4/27/2018.

A *Pei* test report No. 2011-362E - DOC PS 2 Concentrated & Impact Load Test using 3/8" OSB with Barrier coating. Dry & Wet Test with Coated side down - Dated: 4/13/2011, Revised 4/27/2018.

A *Pei* test report No. 2016-2051 - DOC PS 2 Evaluation of Sheathing Materials LP FlameBlock Fire-Rated OSB Sheathing or OSB Blazeguard Bond Performance - Dated: 11/26/2016, Revised 3/28/2018.

A *Pei* test report No. 2017-6147 - DOC PS 2-11 Uniform Load, Concentrated & Impact Load Testing on 7/16" LP FlameBlock Fire-Rated Structural 1 Sheathing - Dated: 11/1/2017

Test report No. 10NK03669 - UL 723 Test for Surface Burning Characteristics of Building Materials - Dated: 4/20/2010

Test report No. 10CA43866 - CAN/ULC-S102-10 Test for Surface Burning Characteristics of Building Materials - Dated: 11/18/2010

Test Report No. T2016P-50 - ASTM E2126 Cyclic Shear Wall Testing of LP FlameBlock Fire-Rated OSB Sheathing - Dated: 12/5/2016

A University of Maine test report No. 18-11-1576 - Testing of LP FlameBlock Fire rated OSB Sheathing, Dated 11/8/2017

A *Pei* test report No. 2019-6046 - Evaluation of a New Flameblock Formulation - Dated: 6/12/2019

Test report No. 103840102SAT-002 - ASTM E2768-11 Testing on Flameblock with Perlite - Dated: 3/28/2019

Test report No. 103840102SAT-003 - ASTM E2768-11 Testing on Flameblock with Pumice - Dated: 3/28/2019



Figure 1 - LP FlameBlock Raw Bundles



Figure 2 - LP FlameBlock packaged as shipped