



Report Number: 0158
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DIVISION: 06- WOOD AND PLASTICS

Section:06080—Factory-Applied Wood
Coatings

Section:06160—Sheathing

REPORT HOLDER:

FLAMEDXX

POST OFFICE BOX 280448

NASHVILLE, TN 37228

(615) 297-2000

www.flamedxx.com

EVALUATION SUBJECT:

FLAMEDXX™ FACTORY APPLIED FIRE-
RETARDANT COATING

ADDITIONAL LISTEES:

ARCH WOOD PROTECTION, INC.

5660 NEW NORTHSIDE DRIVE NW

SUITE 1100

ATLANTA, GA 30328

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2006 International Building Code® (IBC)
- 2006 International Residential Code® (IRC)

1.2 Evaluated in accordance with

- ICC AC264 Dated October 2004

Properties evaluated:

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

- Component of roof covering classified assemblies.

2.0 USES

FLAMEDXX™ Fire Retardant Coating is a proprietary, inert, inorganic, intumescent coating that is factory applied to panels used as a roof sheathing, wall sheathing, an interior finish, a thermal barrier, or a component of a vertical fire-resistance-rated assembly.

3.0 DESCRIPTION

3.1 General The product is an oriented strand board (OSB) panel complying with US DOC PS2 with a factory coating applied to one face (except as specified in section 4.2b) and all edges of the OSB as described in Section 3.2.

3.2 Direct Application Method of Coating Panels: The coating is applied by spray application or by others means (e.g. roll coating or curtain coating) upon the surface of an approved substrate. The coating is dried and allowed to cure prior to stacking.

3.3 Product Names and Descriptions:

3.3.1 FLAMEDXX™ Coated OSB Sheathing—Directly Applied on OSB: A fire-rated sheathing panel with a minimum FLAMEDXX™ dry coating thickness of 0.045 inch (1.1 mm) applied by direct process to a minimum 7/16 in. thick (11.1125 mm) OSB substrate.

4.0 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



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the IBC, or Sections R604 and R803.2 of the IRC.

The manufacturer's published installation instructions and this report shall be strictly adhered to. A copy of the instructions and this report shall 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 shall govern.

4.2 Applications

The panels must be installed in the following applications:

- a. Roof sheathing on buildings of Type III, IV and V constructions for a distance of 4 feet (1200 mm) on both sides of a fire wall to provide continuity [IBC Section 705.6, Exception 4.3, and IRC Section R317.2.2(2) Exception]. The panels shall be installed with FLAMEDXX Coating facing the interior of the building.
- b. Exterior walls on buildings of Type I and II construction, as described in IBC Section 603.1 (1.2). FLAMEDXX shall be coated on both sides of the panels.
- c. Roof sheathing on buildings of Type I construction when the vertical distance from the upper floor to the roof is greater than 20 feet (6096 mm) in structures exceeding two stories in height and Type II construction, as described in the 2006 IBC Section 603.1 (1.3). Refer also to assemblies described in Section 4.4 of this report. The panels shall be installed with FLAMEDXX Coating facing the interior of the building.
- d. Class A interior finish material for walls and ceilings of Type V construction (IBC Section 803 and IRC Section R702 & R315). The panels shall be installed with

FLAMEDXX coating facing the interior of the building.

- e. Thermal barrier for separating foam plastic insulation in walls from the interior of a building (IBC Section 2603.4 & IRC Section R314.1.2). The panels shall be installed with the FLAMEDXX coating facing the interior of the building.
- f. Component of fire-resistant rated construction (IBC Section 703). Refer to assemblies described in Section 4.3 of this report.
- g. Component of roof covering classified assemblies (IBC Section 1505). Refer to assemblies described in Section 4.4 of this report.

4.3 Fire-Resistance-Rated Wall Assemblies:

One-hour Exterior Wall Assembly – Wood Stud Limited Load Bearing Wall – Interior Fire Exposure (reference IBC section 704.5 for applicability of a rated wall exposed to fire from the inside only): The wall assembly shall be constructed of nominally 2 inch by 4 inch #2 or better Southern Yellow Pine wood studs space 16" on center, with one top plate and two bottom plates. The interior fire side of the wall shall be covered by one layer of 5/8" thick (16 mm) Type X gypsum wallboard with no joints applied parallel to the studs. The gypsum wallboard shall be attached using 2-14" type S drywall screws approximately 1/4" head with field spacing of 12" o.c. and 6" o.c. joint spacing. Stud cavities shall be filled with 3 1/2" mineral wool insulation at a 2.5-3.0 pcf density. The exterior face shall be a single layer of 15/32" (12 mm) FLAMEDXX™ Fire Retardant Coated OSB, with the FR coated face applied to the wall cavity. The FLAMEDXX™ Fire Retardant Coated OSB shall be installed vertically with horizontal joints blocked, and shall be attached to the studs using 6d common



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nails, spaced 6 inches o.c. around the perimeter and 12 inches o.c. in the field. When used as a load-bearing wall with a one-hour fire-resistance-rating, the design stress of studs supporting gravity loads shall be reduced to 78 percent of allowable (F_c') with the maximum not greater than 78 percent of the calculated stress with studs having a slenderness ratio (l_e/d) of 33.

4.4 Fire-Classified Roof Covering Assembly:

When used as a component of a fire-classified roof covering assembly it shall have a minimum Class B and Class C roof covering classification when, installed respectively, under the IBC and IRC. – The assembly shall be constructed with 7/16" (11.1125 mm) FLAMEDXX™ Fire Retardant Coated OSB deck material covered with (1) layer of 15lb felt underlayment, and asphalt roof shingles (190 lb. per sq.) Class A, compliant with ASTM 3018. FLAMEDXX™ Fire Retardant Coating may be placed facing the interior or exterior of the building.

5.0 CONDITIONS OF USE

The FLAMEDXX™ Fire Retardant Coated OSB described in this report complies with, or is a suitable alternate 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 shall be designed in accordance with the IBC or the IRC.
- 5.2 Use of FLAMEDXX™ Fire Retardant Coated OSB for applications other than those noted in Section 4.2 of this report is outside the scope of this report..

5.3 FLAMEDXX™ Fire Retardant Coated OSB shall not be used in exterior applications.

5.4 Do not sand FLAMEDXX™ Fire Retardant Coated OSB .

5.5 FLAMEDXX™ Fire Retardant Coated OSB shall be kept dry during storage and installation.

5.6 Do not install FLAMEDXX™ Fire Retardant Coated OSB in damp locations.

5.7 FLAMEDXX™ Fire Retardant Coated OSB panel joints may be spaced 1/8 inch (3.175 mm) to allow for swelling and shrinkage of the panel due to moisture.

5.8 Thermal barrier installation is prohibited in exits such as corridors, stairways, horizontal exits, pressurized enclosures and exit passageways as defined in IBC chapter 10.

5.9 FLAMEDXX™ Fire Retardant Coated OSB is manufactured by FLAMEDXX in Nashville, Tennessee, under a quality control program with inspections by Intertek Testing Services NA, Inc..

5.10 Fire resistant wall assemblies, complying with section 4.3.1 require the use of Southern Yellow Pine Studs as described therein.

6.0 EVIDENCE SUBMITTED

Data in accordance with ICC-ES Acceptance Criteria for Wood Structural Panels Laminated with an Inert, Inorganic Fire Shield (AC264), dated October 2004



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7.0 IDENTIFICATION

Each panel covered by this report shall be identified by a stamp or label visible for field identification after coating specifying:

- 7.1 The name of the inspection agency [Intertek Testing Services NA, Inc. and the evaluation report number (ESR-0158).
- 7.2 The manufacturer's name (FLAMEDXX™), product name, and identification number.
- 7.3 The name of the fire-retardant treatment.
- 7.4 Flame spread and smoke-developed index.
- 7.5 Conformance with applicable standards in accordance with Sections 2303.2.2-2303.2.5 of the IBC and Sections R802.1.3.2-R802.1.3.5 of the IRC.
- 7.6 The grade, thickness and span rating.



IAPMO #0158

A handwritten signature in blue ink, appearing to read "Amir" followed by a stylized flourish.

Director of Evaluation Services