



Report Number: 0173  
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## DIVISION: 06- WOOD AND PLASTICS

Section:06080—Factory-Applied Wood Coatings  
Section:06160—Sheathing

REPORT HOLDER:  
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EVALUATION SUBJECT:  
WOOD STRUCTURAL PANELS WITH  
FLAMEDXX™ FACTORY APPLIED FIRE-  
RETARDANT COATING

### 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

- IAPMO ES EC005-2010, dated May 2010

#### Properties evaluated:

- Surface-burning characteristics
- Durability
- Adhesion
- Abrasion
- Thermal barrier
- Corrosion
- Component of roof covering classified assemblies

### 2.0 USES

FLAMEDXX™ Fire Retardant Coated oriented strand board (OSB) is used as roof sheathing, wall sheathing, an interior finish or a thermal barrier.

### 3.0 DESCRIPTION

**3.1 General** FLAMEDXX™ Fire Retardant Coated OSB is 7/16 inch, 19/32 inch, and 23/32 inch thick exposure 1 rated OSB panels complying with US DOC PS2 as specified in Section 2303.1.4 of the IBC or Section R604 of the IRC and coated with a FLAMEDXX™ fire retardant coating. FLAMEDXX™ fire retardant coating is a proprietary, inert intumescent coating factory applied to one face (except as specified in section 4.2b) as described in Section 3.2. The coating has an adhesion classification of 3A or better. FLAMEDXX™ fire retardant coated OSB wall and roof span rating is 24 for 7/16 inch, 19/32 inch, and 23/32 inch thick panels.

**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 the OSB panels. The coating shall completely 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™ wet coating thickness of 0.006 inch (6 mils) applied by direct process to 7/16 inch, 19/32 inch, and 23/32 inch thick 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 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.

## 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]. Refer to assemblies described in Section 4.3 of this report. The panels shall be installed with the FLAMEDXX™ fire retardant 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™ fire retardant coating shall be applied to both sides of the structural 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 4.3 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™ fire retardant coating facing the interior of the building.

- f. Component of roof covering classified assemblies (IBC Section 1505). Refer to assemblies described in Section 4.3 of this report.

## 4.3 Fire-Classified Roof Covering Assembly, Class A:

The assembly shall be constructed with 7/16" (11.1125 mm) FLAMEDXX™ Fire Retardant Coated OSB deck material covered with (1) layer of 15 lb felt underlayment, and asphalt roof shingles (190 lb. per sq.), class A compliant with ASTM 3018. The FLAMEDXX™ fire retardant coating shall face the interior 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 FLAMEDXX™ Fire Retardant Coated OSB is manufactured by FLAMEDXX in Nashville, Tennessee, under a quality control program that meets the minimum requirements for IAPMO ES Listee's Quality Assurance System.
- 5.2 The structural system is outside the scope of this report and shall be designed in accordance with the IBC or the IRC.
- 5.3 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.
- 5.4 FLAMEDXX™ Fire Retardant Coated OSB shall not be used in exterior or other applications where it is exposed to water.
- 5.5 Do not sand FLAMEDXX™ Fire Retardant Coated OSB.

- 5.6 FLAMEDXX™ Fire Retardant Coated OSB shall be kept dry during storage and installation.
- 5.7 Do not install FLAMEDXX™ Fire Retardant Coated OSB in damp locations.
- 5.8 FLAMEDXX™ Fire Retardant Coated OSB panel joints in a roof may be spaced 0.125 inch (3.175 mm) to allow for swelling and shrinkage of the panel due to moisture.
- 5.9 Thermal barrier installation is prohibited in exits such as corridors, stairways, horizontal exits, pressurized enclosures and exit passageways as defined in IBC chapter 10.
- 5.10 Roof covering materials installed above the temperature the coating intumesces (545°F) are outside the scope of this report.
- 5.11 Exposure to precipitation during storage or installation shall be avoided. If the FLAMEDXX™ Fire Retardant Coated OSB becomes wet, it must be replaced or permitted to dry to a maximum moisture content of 15% or less prior to covering or enclosure by wallboard or other construction materials (except for protection during construction). Panels that have been damaged by exposure to precipitation or by other means or that have been repaired in the field require special inspection. The special inspector shall be approved by the manufacturer.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with IAPMO ES Evaluation Criteria for Wood Structural Panels with Factory-Applied Fire-Retardant Coating (EC 005-2010), dated May 2010. Test results are from laboratories in compliance with ISO/IEC 17025.

## 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 identification of the accredited inspection agency [Intertek/Warnock Hersey].
- 7.2 The manufacturer's name (FLAMEDXX™), product name (FLAMEDXX™ Fire Retardant Coated OSB), address, and identification number.
- 7.3 The name of the fire-retardant coating.
- 7.4 Flame spread index of 10 and a smoke-developed index of 50.
- 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.
- 7.7 Requirements of IBC Section 2303.1.4 and IRC Sections R604 and R803.2 including the grade, mill identification of the base panel, thickness and span rating.
- 7.8 There is no evidence of signification progressive combustion when ASTM E84 is extended to 30 minutes.
- 7.9 A panel coated on one side shall have the coated side of the panel identified by the statement "this side faces the interior of the building". A panel coated on both sides shall have one coated side of the panel identified by the statement "this side faces the interior of the building" and the opposite coated side identified by the statement "FLAMEDXX™".

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**7.10** ES Mark of conformity and report number.



**IAPMO #0173**

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Director of Evaluation Services