



# Surface Burning Characteristics

## Intumescent Coating

Fire Retardant Treated Wood (FRTw) Alternative

### DESCRIPTION

No-Burn Plus is used as an intumescent fire retardant treatment for oriented strand board (OSB) and rough lumber as an alternative to fire retardant treated wood (FRTw). Satisfying IBC Section 2303.2 and IRC Section R802.1.5, No-Burn Plus creates an equivalent treated material in quality, strength, effectiveness, durability and safety.

### ABOUT US

No-Burn intumescent coatings provide the high-performance, code-compliant fire protection needed in new and existing residential and commercial construction. In the presence of extreme heat or fire, intumescent coatings char and swell up to multiple times their original thickness, which shields the substrate and significantly reduces its rate of combustion.

Designed with the professional in mind, our simple one-coat spray application achieves the code compliance you need with a water-based, low VOC emission formula, available in white and tinted coloring.

### KEY FEATURES

- › In Type III Construction, characterized by exterior walls of non-combustible material or fire retardant treated wood, rough lumber and sheathing may be sprayed with No-Burn Plus to meet this requirement.
- › Design values are not affected nor strength when substrates are protected with No-Burn Plus.
- › Non-corrosive with ungalvanized steel, red brass and aluminum fasteners.
- › In accordance with NFPA 13, No-Burn Plus spray-applied to rough lumber and sheathing eliminates the need for sprinklers in concealed spaces.



Technical Evaluation Report  
[TER 2010-01](#)

- › Used in floor, wall, roof and ceiling framing applications including but are not limited to: beams, columns, headers, joists, studs and sheathing.
- › Substrates: Douglas Fir, Laminated Strand Lumber (LSL), Laminated Veneer Lumber (LVL), Oriented Strand Board (OSB) and Southern Yellow Pine (SYP).
- › Significantly shortened lead and schedule durations with No-Burn Plus.
- › Spray-applied in field, single-coat alternative with a flat, white finish.

**Code-compliant solutions. Life-saving protection.**

**No-Burn, Inc.**  
**SALES INFORMATION AND ORDER PLACEMENT**  
**1-800-989-8577**  
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**LIMITED WARRANTY** No-Burn, Inc. warrants that the No-Burn® formula will be manufactured to the same specifications and quality, and will perform equally to the tests performed by the independent laboratories when properly applied. Warranty coverage is limited solely to the cost of product purchased hereunder and specifically excludes incidental expenses and consequential damages. The applicator warrants that the product, in its original form from the manufacturer, will be stored, mixed and/or applied as directed in the guidelines published by No-Burn, Inc., to every reasonably accessible area that has been specified for protection. On occasion, No-Burn Plus may be applied to substrates that need protection from the environment in transit or on a jobsite. The No-Burn Warranty may be void if the No-Burn Plus coated substrates, while in transit or during construction, are not protected from prolonged exposure to adverse weather conditions as specified by manufacturer recommendations. All implied warranties, from No-Burn, Inc. or the applicator are excluded. There may be situations and materials for which No-Burn will not prevent a fire from igniting or retard the progress of a fire.  
**POLICY & PROCEDURES** All sales of this product by No-Burn, Inc. are subjected to our Policy & Procedures available at <https://www.noburn.com/policies-procedures/>  
**UPDATES AND CURRENT INFORMATION** Revised 11-Nov-2021. The information in this document may change without notice.



### PRODUCT DESCRIPTION

No-Burn Plus is an International Building, International Residential, and National Fire Protection Association Life Safety 101 thin film intumescent coating. When exposed to high temperatures and flame, Plus intumesces creating a char-barrier protecting treated substrates from fire. Manufactured in compliance with ISO 9001, as a certified intumescent coating, Plus is applied to a variety of combustible substrates achieving the fire performance prescribed.

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Designed with the professional in mind, our simple one-coat spray application achieves the code compliance you need with a water-based, low VOC emission formula, available in white and tinted coloring.

### PRODUCT SPECIFICATIONS

Color: White/Tinted  
[Intumescent Color Wheel & Tinting](#)

White	Tinted
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Finish: Flat  
 pH: 7-8  
 Application: [Best Practices for Application](#)  
 Film Thickness: Reference Code and Compliance Report  
 Dry Time: 60-90 minutes  
 Safety: [Plus Safety Data Sheet \(SDS\)](#)  
 Overcoat: Water-based with pH of 7-8  
 VOC Content: 18 g/L  
 VOC Emissions: [CDPH \(CA Spec 01350\) Compliant](#)



### PACKAGING/STORAGE

Pails: 5 gallons (19 L), 55 lbs.  
 Drums: 55 gallon drum (208 L), 605 lbs.  
 Shelf Life: 24 months in unopened sealed containers, properly stored  
 Storage: 40°F (4°C) – 90° F (32°C)  
[Best Practices for Safe Handling & Storage](#)

### PLUS

Code Requirement	Compliance
Interior Finish	FS 0-5 SD 0-35, Class A: <a href="#">ER-305</a>
Surface Burning Characteristics	FRTw Alternative: <a href="#">TER 2010-01</a>
Fire Resistance/ Fire Protection of Floors	2" x 10" Dimension Lumber Equivalent: <a href="#">ER-305</a>
Thermal Barrier Assembly	15 minutes: <a href="#">ER-305</a>
Ignition Barrier Assembly	5± Minutes: <a href="#">ER-305</a> , <a href="#">TER 1905-03</a>
Vapor Retarder	5 perms, Class III
USDA Incidental Food Contact	ANSI/NSF 51 Food Zone Materials

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**TRADEMARKS** No-Burn, No-Burn logo and Fire Wise are trademarks owned by or licensed to No-Burn, Inc.  
**LIMITED WARRANTY** No-Burn, Inc. warrants that the No-Burn® formula will be manufactured to the same specifications and quality, and will perform equally to the tests performed by the independent laboratories when properly applied. Warranty coverage is limited solely to the cost of product purchased hereunder and specifically excludes incidental expenses and consequential damages. The applicator warrants that the product, in its original form from the manufacturer, will be stored, mixed and/or applied as directed in the guidelines published by No-Burn, Inc., to every reasonably accessible area that has been specified for protection. On occasion, No-Burn Plus may be applied to substrates that need protected from the environment in transit or on a jobsite. The No-Burn Warranty may be void if the No-Burn Plus coated substrates, while in transit or during construction, are not protected from prolonged exposure to adverse weather conditions as specified by manufacturer recommendations. All implied warranties, from No-Burn, Inc. or the applicator are excluded. There may be situations and materials for which No-Burn will not prevent a fire from igniting or retard the progress of a fire.  
**POLICY & PROCEDURES** All sales of this product by No-Burn, Inc. are subjected to our Policy & Procedures available at <https://www.noburn.com/policies-procedures/>  
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SECTION 099646 - INTUMESCENT PAINTING

PART 1 - GENERAL

## 1.1 SUMMARY

## A. Section Includes:

1. Intumescent paint for [interior] [and] [exterior] items and surfaces.

## B. Related Requirements:

1. Section 078123 "Intumescent Fire Protection" for fire-resistance-rated intumescent mastic materials.
2. Section 099113 "Exterior Painting" for primers and finish coats that may be used with intumescent paint finishes.
3. Section 099123 "Interior Painting" for primers and finish coats that may be used with intumescent paint finishes.
4. Section 099300 "Staining and Transparent Finishing" for primers, finish coats, and wood stains that may be used with intumescent paint finishes.
5. Section 099633 "High-Temperature-Resistant Coatings" for special coatings designed for use on steel subject to extremely high temperatures.

## 1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at [Project site] <Insert location>.

## 1.3 ACTION SUBMITTALS

## A. Product Data: For each type of product.

1. Fire propagation characteristics.
2. Indicate VOC content.

## B. Sustainable Design Submittals:

1. Product Data: For paints and coatings, indicating VOC content.
2. Evaluation Reports or Certificates: For paints and coatings, indicating compliance with requirements for low-emitting materials.

## C. Samples: For each type of product.

## D. Samples for Initial Selection: For each type of product.

## E. Samples for Verification: For each type of coating system and each color and gloss of intumescent paint finish indicated.

1. Submit Samples on [rigid backing] [actual substrate], not less than 8 inches (200 mm) square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

## F. Product Finish Schedule: Use same designations indicated on Drawings and in Part 3 intumescent painting schedules to cross-reference paint systems specified in this Section. Include color designations.

## 1.4 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports or Listings: For each intumescent paint and coating, indicating compliance with fire-propagation requirements.

## 1.5 MOCKUPS

- A. Mockups: Apply mockups of each paint system indicated to verify preliminary selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint or coating system.

- a. Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
- b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

- a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with intumescent paint or coating manufacturer's written instructions for products and applications as indicated on product labels, product data sheets, and application guidelines.

## 1.7 FIELD CONDITIONS

- A. Apply waterborne intumescent paints only when temperatures of surfaces to be painted and ambient air temperatures are between 40 and 90 deg F (4.4 and 32 deg C).
- B. Surface temperatures of substrates to not exceed 100 deg F (37.7 deg C).
- C. Ideal installation temperature is 65 deg F (18.3 deg C) and less than 60 percent relative humidity.
- D. For continuous high-humidity conditions of 70 percent or higher, provide exterior water-based latex top coat.
- E. Allow wet surfaces to dry thoroughly and to attain temperature and conditions specified before starting or continuing intumescent paint application.

## PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide No-Burn, Inc.; Plus intumescent paint.
- B. Performance Criteria:
  1. Finish: Flat.
  2. Color: White.
  3. Low-VOC Content: 18 g/L or less of water in accordance with EPA Method 24.
  4. Solids by Volume: 60-70 percent.

## 2.2 INTUMESCENT PAINT PRODUCTS, GENERAL

- A. Comply with requirements for fire-protective intumescent coating classification and surface-burning characteristics indicated.
- B. Surface-Burning Characteristics - 10-Minute Tunnel Test: As tested in accordance with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  1. Flame-Spread Index: 25 or less.
  2. Smoke-Developed Index: 450 or less.
- C. Surface-Burning Characteristics for Wood - 30-Minute Tunnel Test: As tested in accordance with ASTM E84 or ASTM E2768; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  1. Flame Front Maximum Reach: 10 ft. (3.048 m).
  2. Evidence of Continued Combustion: None, when test continued for 30 minutes.
  3. Classification: Fire Retardant Treated Wood (FRTw) equivalent and complies with definition of an ignition-resistant material.
- D. Fire Resistance: Complies with ASTM E119 [as an equivalent to 2-by-10-inch (600-by-3000 mm) dimension lumber]; testing by a qualified testing agency. Identify products with appropriate markings of applicable approval agency.
- E. Thermal Barrier Coating: Complies with NFPA 286, FM 4880, UL 1040, or UL 1715. Identify products with appropriate markings of applicable approval agency.
- F. Ignition Barrier Coating: Complies with ICC-ES AC377, Appendix X. Identify products with appropriate markings of applicable approval agency.
- G. Material Compatibility:
  1. For each material or application, provide products recommended in writing by intumescent paint manufacturer for use on substrate indicated.
- H. VOC Content: For field applications [that are inside the weatherproofing system], paints and coatings to comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:
  1. Flat Paints and Coatings: 50 g/L.

- J. Low-Emitting Materials: Interior paints and coatings to comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

- K. Material Emissions and Pollutant Control: Field-applied paints and coatings that are inside the weatherproofing system to comply with either of the following:

1. Low-Emitting Materials: VOC emissions to comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Formaldehyde emissions to not exceed 9 mcg/cu. m or 7 ppb, whichever is less.
2. VOC content to not exceed limits of authorities having jurisdiction and the following:
  - a. Flat Coatings: 50 g/L.

- L. Emissions Requirements: Field-applied paints and coatings that are inside the weatherproofing system to comply with either of the following:

1. Low-Emitting Materials: VOC emissions to comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
2. VOC content to not exceed limits of authorities having jurisdiction and the following:
  - a. Flat Coatings: 50 g/L.

- M. VOC Content: For field applications inside the building, wall paints to comply with VOC content limits of authorities having jurisdiction and the following VOC content limits:

1. Interior Flat Latex Wall Paint: 50 g/L.

- N. VOC Emissions: For field applications inside the building, wall paints to contain no more than half of the chronic REL of VOCs when tested in accordance with the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." The building concentration of formaldehyde to not exceed half of the indoor recommended exposure limit or 33 mcg/cu. m and that of acetaldehyde to not exceed 9 mcg/cu. m.

- O. Colors and Sheen: White, flat [As selected by Architect from manufacturer's full range] [As indicated in a color schedule].

## 2.3 MISCELLANEOUS MATERIALS

- A. Topcoat: 6- to 8-mil- (0.15- to 0.20-mm) thick, [water-based latex-based paint] [exterior topcoat] recommended in writing by intumescent paint manufacturer as compatible with substrate materials.
  1. Basis-of-Design Exterior Topcoat: Subject to compliance with requirements, provide Behr Premium Plus Exterior Paint or comparable product.
  2. Decorative Topcoat: Water-based latex-based paint for interior conditioned spaces recommended in writing by intumescent paint manufacturer as compatible with substrate materials.
  3. Protective Topcoat, Interior or Exterior: VOC-compliant topcoat, for interior or exterior unconditioned spaces subject to constant high humidity, condensation, or direct contact with moisture.

## PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates and conditions, for compliance with manufacturer's requirements for surface treatments, shop-primed surfaces, maximum moisture content, and other conditions affecting performance of the Work.

## 3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and coating systems indicated.
- B. Remove hardware and hardware accessories, plates, machined surfaces, light fixtures, and similar items already installed that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.



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SUBMITTAL SHEET



Plus

Intumescent Coating

Wood, Spray Polyurethane Foam Insulation & Drywall

1. After completing coating application, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants. Do not coat surfaces if surface moisture content or alkalinity exceeds that permitted in manufacturer's written instructions.
  1. Remove incompatible primers, and reprime substrate with compatible primers as required to produce coating systems indicated.
  2. Perform cleaning and coating application so dust and other contaminants from cleaning process do not fall on wet, newly coated surfaces.
- E. Spray Polyurethane Foam, Closed-Cell Spray Polyurethane Foam:
  1. Ignition Barrier Assembly, Interior Finish:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.
- F. Spray Polyurethane Foam, Open-Cell Spray Polyurethane Foam:
  1. Ignition Barrier Assembly, Interior Finish:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.

END OF SECTION 099646

### 3.3 INSTALLATION

- A. Apply intumescent paints in accordance with manufacturer's written instructions and to comply with requirements for evaluations, listings, and labels.
  1. Use equipment and techniques best suited for substrate and type of material being applied.
- B. Apply coatings to prepared surfaces as soon as practical after preparation.
- C. Apply coatings to produce surface films without holidays, laps, sags, or other surface imperfections. Produce sharp lines.

### 3.4 CLEANING AND PROTECTION

- A. Protect work of other trades from coating application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

### 3.5 EXTERIOR INTUMESCENT PAINTING SCHEDULE

- A. Wood Substrates, Solid Sawn Lumber and Sheathing:
  1. Surface-Burning Characteristics:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.
    - b. Topcoat (optional): Exterior, select sheen.
      - 1) Behr: Behr Premium Plus Exterior Paint.
- B. Wood Substrates, Engineered Wood Lumber and Sheathing:
  1. Surface-Burning Characteristics:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.
    - b. Topcoat (optional): Exterior, select sheen.
      - 1) Behr: Behr Premium Plus Exterior Paint.

### 3.6 INTERIOR INTUMESCENT PAINTING SCHEDULE

- A. Wood Substrates, Solid Sawn Lumber and Sheathing:
  1. Surface-Burning Characteristics:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.
- B. Wood Substrates, Engineered Wood Lumber and Sheathing:
  1. Surface-Burning Characteristics:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.
- C. Wood Substrates, I-Joist:
  1. Fire Resistance Assembly: As an equivalent to 2-by-10-inch (600-by-3000 mm) dimension lumber:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.
- D. Structural Insulated Panels:
  1. Thermal Barrier Assembly, Interior Finish:
    - a. Intumescent Paint: As recommended in writing by manufacturer.
      - 1) No-Burn, Inc.: No-Burn Plus.



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