

EXTERIOR FIRE-X®

FIRE RETARDANT TREATED LUMBER AND PLYWOOD ENGINEERING DATA

The following design value adjustments and plywood span ratings should be utilized for EXTERIOR FIRE-X:

DESIGN VALUE ADJUSTMENTS FOR EXTERIOR FIRE-X LUMBER

The adjustments tabulated below apply to EXTERIOR FIRE-X fire retardant treated southern pine lumber which bears the grademark of an ALS approved lumber grading or inspection agency and is used in the following conditions of service:

- A. In non-roof system applications where the ambient temperature does not exceed 125° F. **OR**
- B. As framing members in roof systems where
 - (1) Lumber temperature does not exceed 150° F; and
 - (2) Ventilation is evenly distributed, provides a uniform air flow over all interior roof surfaces, and is sufficient to effectively remove moisture when the roof system is warmed by solar radiation.

Property	Adjustment Factor
Extreme fiber in bending	.85
Tension parallel to grain	.80
Horizontal shear	.90
Compression perpendicular to grain	.90
Compression parallel to grain	.90
Modulus of elasticity	.90
Fastener/connector design loads	.90

For special applications where structural members may exceed a temperature of 150° F. contact Hoover Treated Wood Products, Inc. at 800/TEC-WOOD or 706/595-5058.

SPAN RATINGS FOR EXTERIOR FIRE-X PLYWOOD

The following plywood roof sheathing and subfloor spans apply to span-rated plywood and/or plywood bearing the trademark of an approved inspection agency, treated with EXTERIOR FIRE-X fire retardant where roof system ventilation is evenly distributed, provides a uniform air flow over all interior roof surfaces, and is sufficient to effectively remove moisture when the roof system is warmed by solar radiation.

Panel Thickness (in.)	Untreated Span Index Rating	Exterior Fire-X Max. span (in.)	
		Roof Sheathing (1, 2, 3, 5)	Subfloor (2)
11/32, 3/8	24/0	—	—
15/32, 1/2	32/16	24	16
19/32, 5/8	40/20	32	20
23/32, 3/4	48/24	40	24
7/8 (4)	—	48	24

- (1) Clips, blocking or other edge supports must be used with roof sheathing.
- (2) Maximum roof load: 10 psf DL, plus 40 psf LL Maximum floor load: 10 psf DL, plus 100 psf LL
- (3) For flat roof applications, call Hoover Treated Wood Products, Inc. at 800/TEC-WOOD or 706/595-5058.
- (4) Limited to 7/8" CDX plywood made with Group 1 species.
- (5) EXTERIOR FIRE-X treated plywood shall not be used in roof designs employing a radiant shield that is located underneath the bottom surface of the sheathing.

NOTE: THESE SPAN RATINGS ARE BASED ON TEST RESULTS FOR EXTERIOR FIRE-X TREATED PLYWOOD AFTER EXTENDED EXPOSURE TO ELEVATED TEMPERATURES AND MOISTURE.

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HOOVER TREATED WOOD PRODUCTS, INC.

TECHNICAL NOTE

FOR ADDITIONAL INFORMATION: 1-800-TEC-WOOD (832-9663)

SPECIFICATION GUIDE FOR *EXTERIOR FIRE-X* Exterior Fire Retardant Treated Wood

PART 1 – GENERAL

1.01 PRODUCT IDENTIFICATION

- A. All lumber and plywood designated to be exterior fire retardant treated shall be pressure impregnated with ***EXTERIOR FIRE-X*** which has a flame spread rating of 25 or less when tested in accordance with ASTM E 84, “Standard Test Method for Surface Burning Characteristics of Building Materials”. ***EXTERIOR FIRE-X*** fire retardant treated wood shall show no evidence of significant progressive combustion when the test is extended for an additional 20 minute period. The flame front shall not progress more than 10½ feet beyond the centerline of the burners at any time during the test.
- B. In addition, there shall be no increase in the listed classification when tested after ASTM D 2898 “Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing.”
- C. Fire retardant treated lumber and plywood shall be manufactured under the independent third party inspection of Underwriters Laboratories Inc. (UL) Follow-Up Service and each piece shall bear the UL classified mark indicating the extended ASTM E 84 test.
- D. Each piece shall be labeled kiln dried after treatment (KDAT). Timber Products Inspection, Inc. (TP) shall monitor the process and the TP mark shall appear on the label.
- E. Optional pressure applied blue stain for easy identification.

PART 2 – PRODUCTS

2.01 FIRE RETARDANT TREATMENT

- A. Treatment shall be ***EXTERIOR FIRE-X*** manufactured by Hoover Treated Wood Products, Inc.
- B. All exterior fire retardant treated wood shall be kiln dried after treatment to a maximum moisture content of 19% for lumber and 15% for plywood.
- C. Kiln drying after treatment shall be monitored by Timber Products Inspection, and the identification label on each piece of wood shall so indicate.
- D. Exterior fire retardant treated lumber and plywood shall use design value adjustments and span ratings as published by the manufacturer.
- E. The fire retardant formulation must be free of halogens, sulfates, chlorides, and ammonium phosphate.
- F. Provide lumber of the appropriate grade and species as specified by the design criteria of the intended application.
- G. Provide plywood of the appropriate size, grade and species as specified by the design criteria of the intended

2.02 PRODUCT SUBSTITUTION

No substitutions permitted.

PART 3 – EXECUTION

3.01 FIELD CUTS

- A. Lumber: Do not rip or mill fire retardant treated lumber. Cross cuts, joining cuts, and drilling holes are permitted.
- B. Plywood: Fire retardant treated plywood may be cut in any direction.

3.02 APPLICATION

- A. ***EXTERIOR FIRE-X*** fire retardant treated lumber and plywood used in structural applications shall be applied according to the lumber and plywood strength tables provided by the manufacturer.
- B. ***EXTERIOR FIRE-X*** is a non-leachable fire retardant treatment and may be installed with direct exposure to precipitation; however, it cannot be substituted for preservative treated wood.

AFX-Spec 11/05

As of 3/01/2013

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