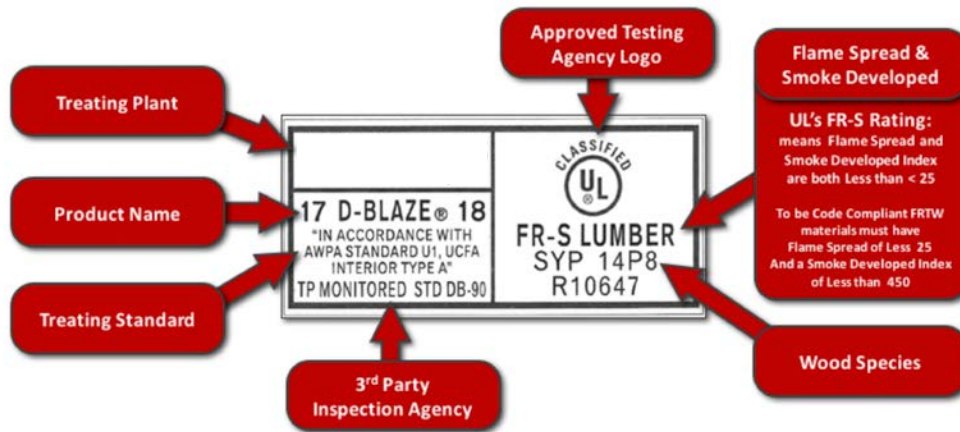


New York City Building Code Acceptance of FRTW 2303.2.1 Labeling.

Fire-retardant-treated lumber and wood structural panels shall be labeled. The label shall contain the following items:

1. The identification of an approved agency in accordance with Chapter 1 of Title 28 of the Administrative Code.
2. Identification of the treating manufacturer.
3. The name of the fire-retardant treatment.
4. The species of wood treated.
5. Flame spread and smoke-developed index.
6. Conformance with appropriate standards in accordance with Sections 2303.2.2 through 2303.2.5.

NEW YORK CITY DEPARTMENT OF BUILDINGS REQUIRES FRTW LABEL



Note:

- A Product Dyed Red should not be accepted as a substitute for a building code approved, third-party inspection agency label.
- Spray-On Fire Retardants do not meet the Building Code requirements of Pressure-Impregnated Fire Retardant Treated wood

2303.1.4 Wood structural panels. Wood structural panels, when used structurally (including those used for siding, roof and wall sheathing, subflooring, diaphragms and built-up members), shall conform to the requirements for their type in DOC PS 1 or PS 2. Each panel or member shall be identified for grade and glue type by the trademarks of an approved testing and grading agency. Wood structural panel components shall be designed and fabricated in accordance with the applicable standards listed in Section 2306.1 and identified by the trademarks of an approved testing and inspection agency indicating conformance with the applicable standard. In addition, wood structural panels when permanently exposed in outdoor applications shall be of exterior type, except that wood structural panel roof sheathing exposed to the outdoors on the underside is permitted to be interior type bonded with exterior glue, Exposure 1.



2303.2 Fire-retardant-treated wood. Fire-retardant-treated wood is any wood product which, when impregnated with chemicals by a pressure process or other means during manufacture, shall have, when tested in accordance with ASTM E 84, a listed flame spread index of 25 or less and show no evidence of significant progressive combustion when the test is continued for an additional 20-minute period. In addition, the flame front shall not progress more than 10.5 feet (3200 mm) beyond the centerline of the burners at any time during the test.

2303.2.2 Strength adjustments. Design values for untreated lumber and wood structural panels, as specified in Section 2303.1, shall be adjusted for -re-retardant-treated wood. Adjustments to design values shall be based on an approved method of investigation that takes into consideration the effects of the anticipated temperature and humidity to which the -re-retardant-treated wood will be subjected, the type of treatment and redrying procedures.

2303.2.2.1 Wood structural panels. The effect of treatment and the method of redrying after treatment, and exposure to high temperatures and high humidities on the flexure properties of fire-retardant-treated softwood plywood shall be determined in accordance with ASTM D 5516. The test data developed by ASTM D 5516 shall be used to develop adjustment factors, maximum loads and spans, or both, for untreated plywood design values in accordance with ASTM D 6305. Each manufacturer shall publish the allowable maximum loads and spans for service as floor and roof sheathing for its treatment.

2303.2.2.2 Lumber. For each species of wood treated, the effect of the treatment and the method of redrying after treatment and exposure to high temperatures and high humidity's on the allowable design properties of fireretardant-treated lumber shall be determined in accordance with ASTM D 5664. The test data developed by ASTM D 5664 shall be used to develop modification factors for use at or near room temperature and at elevated temperatures and humidity in accordance with an approved method of investigation. Each manufacturer shall publish the modification factors for service at temperatures of not less than 80°F (26.7°C) and for roof framing. The roof framing modification factors shall take into consideration the climatological location.

2303.2.3 Exposure to weather, damp or wet locations. Where -re-retardant-treated wood is exposed to weather, or damp or wet locations, it shall be identified as "Exterior" to indicate there is no increase in the listed flame spread index as defined in Section 2303.2 when subjected to ASTM D 2898.

2303.2.4 Interior applications. Interior -re-retardant-treated wood shall have moisture content of not over 28 percent when tested in accordance with ASTM D 3201 procedures at 92-percent relative humidity. Interior fireretardant-treated wood shall be tested in accordance with Section 2303.2.2.1 or 2303.2.2.2. Interior fire-retardant treated wood designated as Type A shall be tested in accordance with the provisions of this section.

2303.2.5 Moisture content. Fire-retardant-treated wood shall be dried to a moisture content of 19 percent or less for lumber and 15 percent or less for wood structural panels before use. For wood kiln dried after treatment (KDAT), the kiln temperatures shall not exceed those used in kiln drying the lumber and



plywood submitted for the tests described in Section 2303.2.2.1 for plywood and 2303.2.2.2 for lumber.

2303.2.6 Type I and II Construction Applications
See Section 603.1 for limitations on the use of fire-retardant-treated wood in buildings of Type I or II construction.

Chapter 6 Types of Construction Section 601 General BUILDINGS BULLETIN

601.1 Scope

The provisions of this chapter shall control the classification of buildings as to type of construction with respect to occupancy and exterior fire separation distance.

Section 602 Construction Classification

602.1 General

Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5. The building elements shall have a fire-resistance rating not less than that specified in Table 601 and exterior walls shall have a fire-resistance rating not less than that specified in Table 602. Buildings constructed or altered inside the fire district shall further comply with Appendix D.

602.1.1 Minimum Requirements

A building or portion thereof shall not be required to conform to the details of a type of construction higher than that type, which meets the minimum requirements based on occupancy even though certain features of such a building actually conform to a higher type of construction. Classification shall be that of the minimum requirement unless all of the requirements for the higher type of construction are met.

602.2 Types I and II

Type I and II construction are those types of construction in which the building elements listed in Table 601 are of noncombustible materials.

602.3 Type III

Type III construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies of a 2-hour rating or less.

Exceptions:

1. In Group I-1, R-1, and R-2 occupancies, all exterior walls, fire walls, exit passageways, and shaft enclosures shall be non-combustible.
2. In Group F occupancies subject to Section 270(1) of the New York State Labor Law, all exterior wall assemblies and all structural elements shall meet the requirements for a "fireproof building" as such term is defined in Section 264 of such law.
3. Inside the fire district, exterior load-bearing walls shall be constructed of noncombustible material.



4. Inside the fire district, exterior nonload-bearing walls may be constructed with fire-retardant-treated wood complying with Section 2303.2 where the building is equipped throughout with an automatic sprinkler system in accordance with Sections 903.3.1.1 through 903.3.1.3, unless otherwise prohibited by Exception 1 or 2 above. Chapter 6 Types of Construction

602.4 Type IV

Type IV construction (Heavy Timber, HT) is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid or laminated wood without concealed spaces. The details of Type IV construction shall comply with the provisions of this section. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies with a 2-hour rating or less.

Exceptions:

1. In Group I-1, R-1, and R-2 occupancies, all exterior walls, fire walls, exit passageways, and shaft enclosures shall be non-combustible.
2. In Group F occupancies subject to Section 270(1) of the New York State Labor Law, all exterior wall assemblies and all structural elements shall meet the requirements for a "fireproof building" as defined in Section 264 of such law.
3. Inside the fire district, exterior load-bearing walls shall be constructed of noncombustible material.
4. Inside the fire district, exterior non-bearing walls may be constructed with fire-retardant-treated wood complying with Section 2303.2 where the building is equipped throughout with an automatic sprinkler system in accordance with Sections 903.3.1.1 through 903.3.1.3, unless otherwise prohibited by Exception 1 or 2 above.

Where a horizontal separation of 20 feet (6096 mm) or more is provided, wood columns and arches conforming to heavy timber sizes shall be permitted to be used externally, except as prohibited by Section 602.4 for Occupancy Groups F, I-1, R-1 and R-2.

602.5 Type V

Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code. Type V construction shall not be permitted inside the fire district.

Exception: In Group F occupancies subject to Section 270(1) of the New York State Labor Law, all exterior wall assemblies and all structural elements shall meet the requirements for a "fireproof building" as defined in Section 264 of such law.

603.1 Allowable Materials

Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3.

1. Fire-retardant-treated wood, complying with Section 2303.2, shall be permitted in:
 - 1.1. Nonbearing interior partitions where the required fire-resistance rating is 1 hour or less.

Exception: Public corridors and exits shall be constructed of noncombustible materials.



- 1.2. Roof construction as permitted in Table 601, Note c, Item 3.
2. Thermal and acoustical insulation, other than foam plastics, having a flame spread index of not more than 25.

Chapter 6 Types of Construction (Continued)

Exceptions:

1. Insulation placed between two layers of combustible materials without an intervening airspace shall be allowed to have a flame spread index of not more than 100.
2. Insulation installed between a finished floor and solid decking without intervening airspace shall be allowed to have a flame spread index of not more than 200.
3. Foam plastics in accordance with Chapter 26.
4. Roof coverings that have an A or B classification as defined in Section 1505.
5. Interior floor finish and interior finish, trim and millwork such as doors, door frames, window sashes and frames, as permitted by Chapter 8.
6. Where not installed over 15 feet (4572 mm) above grade, show windows, nailing or furring strips, wooden bulkheads below show windows, their frames, aprons and show cases, as permitted by Section 1405.
7. Finished flooring applied directly to the floor slab or to wood sleepers that are firestopped in accordance with Section 717.2.7, where combustible finish flooring is permitted by Chapter 8.
8. Partitions dividing portions of stores, offices or similar places occupied by one tenant only and which do not establish a corridor serving an occupant load of 30 or more shall be permitted to be constructed of fire-retardant-treated wood, 1-hour fire-resistance-rated construction or of wood panels or similar light construction up to 6 feet (1829 mm) in height.
9. Platforms as permitted in Section 410.
10. Combustible exterior wall coverings in accordance with Chapter 14.
11. Blocking such as for handrails, millwork, cabinets and window and door frames.
12. Light-transmitting plastics as permitted by Chapter 26.
13. Mastics and caulking materials applied to provide flexible seals between components of exterior wall construction.
14. Exterior plastic veneer installed in accordance with Section 2605.2.
15. Nailing or furring strips as permitted by Section 803.4.
16. Heavy timber as permitted by Note c, Item 2, Table 601 and Section 602.4.7.
17. Aggregates, component materials and admixtures as permitted by Section 703.2.2.
18. Sprayed cementitious and mineral fiber fire-resistance-rated materials installed to comply with Section 1704.11.
19. Materials used to protect penetrations in fire-resistance-rated assemblies in accordance with Section 712.
20. Materials used to protect joints in fire-resistance-rated assemblies in accordance with Section 713.
21. Materials allowed in the concealed spaces of buildings of Type I and II construction in accordance with Section 717.5.
22. Materials exposed within plenums complying with Section 602 of the New York City Mechanical Code.



§[C26-502.6] 27-328 Fire retardant treated wood.

(a) Material. - Fire retardant treated wood shall be pressure treated with fire retardant chemicals in accordance with reference standards RS 5-3 and RS 5-4. Where used as a structural element or as furring, the material shall have a flame spread rating not greater than twenty-five when tested in accordance with reference standard RS 5-5 when exposed for a period of at least thirty minutes, with no evidence of significant progressive combustion. Where used as interior finish or trim, the material shall have a flame spread rating that meets the requirements of section 27-348 of this subchapter for the location in which it is used. Subsequent to treatment, material two inches thick or less shall be air dried or kiln dried to an average moisture content of not more than nineteen percent.

(b) Label. - All fire-retardant treated wood shall bear the identification of a testing laboratory or producer certifying to the performance thereof, in accordance with the acceptance requirements of section 27-131 of article seven of subchapter one of this chapter.

(c) Application. - Fire-retardant treated wood may not be used where exposed to the weather or in interior spaces where the relative humidity is normally eighty percent or more. There shall be no fabrication of the material after treatment, such as cutting, shaping, or grooving for splines or ring connectors so as to expose untreated surfaces, except that the material may be cut to length, shaped, or grooved if the exposed surfaces or edges are tightly butted against other material that is noncombustible or that is fire retardant treated, so that no untreated wood is left exposed to danger of ignition. Holes may be bored or cut for plumbing or heating pipes and for electric outlets only if the openings are covered [sic] with tightly-fitted noncombustible escutcheons or cover plates. The allowable working stresses of the material shall be ninety percent of the allowable stresses for untreated lumber of like classification.

(d) Where permitted in construction group I - Fire-retardant treated wood may be used in buildings of construction group I in the following cases:

1. As permitted by table 3-4.
2. For interior non-bearing partitions that are not required to have a fire-resistance rating.
3. For interior furring and blocking of exterior walls, furring and blocking of interior walls and partitions, and framing of suspended ceilings provided the furring, blocking, and framing do not affect the integrity, or reduce the fire-resistance rating, of the construction element.
4. For interior finish and trim.

(e) Area increase. - Fire-retardant treated wood may be used in construction group II buildings in lieu of untreated wood for wall studs, bearing partition studs, columns, beams, girders, joists, rafters, trusses, sole and cap plates, subflooring and roof decks, and when so used, the area limitations of tables 4-1 and 4-2, for buildings of construction group II, may be increased by thirty-three and one-third percent.

