



Q: Is wood allowed in buildings classified as non-combustible per the International Building Code (IBC)?

A: Even in the noncombustible construction types (Types I and II), many nonstructural elements of the building, such as floor coverings, windows and doors, and interior finishes, can be wood. Permitted combustible building elements in noncombustible buildings are conveniently listed in Section 603 of the *IBC*. This list includes structural elements that are constructed of fire retardant treated wood (FRTW). FRTW is not considered noncombustible, but can often be used in place of noncombustible materials. For instance, FRTW can be used in place of noncombustible materials in exterior walls of Type III buildings, and in roof structures of low-rise buildings of Types I and II construction. The following Table summarizes where fire-retardant treated wood is permitted to be used in lieu of noncombustible materials in roof structures.

Wood Roof Systems per 2009 International Building Code (IBC)

Material	IA	IB	IIA	IIB	IIIA	IIIB	IV
Wood	Not allowed (602.2)	Not allowed (602.2)	Not allowed (602.2)	Not allowed (602.2)	Allowed (602.3)	Allowed (602.3)	Allowed (602.4.3)
FRTW	Allowed ≥ 2 stories and if roof $\geq 20'$ above top floor (Table 601 footnote b and 603.1(25.3))* and Unprotected allowed if ≤ 2 stories and roof $\geq 20'$ above top floor (Table 601 footnote b)	Allowed (603.1(25.3))* and Unprotected allowed if roof $\geq 20'$ above top floor (Table 601 footnote b)	Allowed (603.1(25.3))* and Unprotected allowed if roof $\geq 20'$ above top floor (Table 601 footnote b)	Allowed (603.1(25.3))*	Allowed (602.3) and Unprotected allowed if roof $\geq 20'$ above top floor (Table 601 footnote b)	Allowed (602.3)	Allowed if no concealed spaces (602.4)
Heavy Timber	Not allowed (602.2)	Allowed (Table 601 footnote c)	Allowed (Table 601 footnote c)	Allowed (Table 601 footnote c)	Allowed (Table 601 footnote c)	Allowed (602.3)	By definition

*(603.1(1.3)) by errata

Pertinent Sections from the 2009 IBC

Table 601 Footnote b: Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated-wood members shall be allowed to be used for such unprotected members.

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, except as permitted in Section 603 and elsewhere in this code.

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.

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

1. Fire-retardant-treated wood shall be permitted in:
- 1.3. Roof construction, including girders, trusses, framing and decking.

Exception: In buildings of Type IA construction exceeding two stories in height, fire-retardant-treated wood is not permitted in roof construction when the vertical distance from the upper floor to the roof is less than 20 feet.