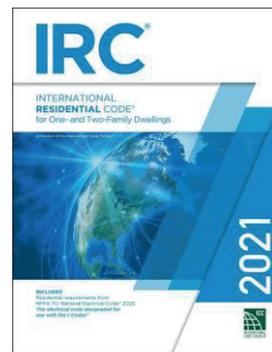
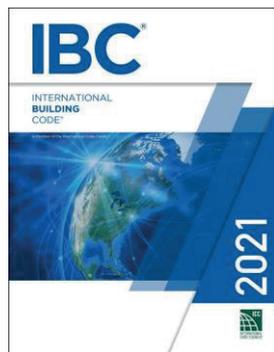

TECHNICAL BULLETIN

Understanding Building Codes

Understanding the International Building Code/International Residential Code definitions of "Naturally Durable Wood" and "Fire-Resistant Wood" for exterior building applications and code compliance.

Building Codes

Most municipalities have now adopted or included the International Building and International Residential Codes in their building codes as the benchmark for minimum standards in design and construction.



Naturally Durable Wood

Not all wood is created equal. Species selection will have a significant impact on both the appearance and performance of any exterior building project. To meet the code, a wood species must be chosen that meets the "Naturally Durable" definition under the International Building Code and International Residential Code compliance requirements.

The International Building Code (IBC) and International Residential Code (IRC) require the use of treated or naturally durable wood to have the durability of redwood or cedar as a minimum standard for deck construction.

Both Redwood and Cedar have a durability class rating of Class 2 (moderate) or higher in above-ground applications.

It is important to note that the durability rating of wood is associated with heartwood. As such, untreated sapwood of redwood, cedar, or any other species must always be considered non-durable.

Fire-Resistant Wood

International Building Codes do not reference naturally fire-resistant wood. They do, however, reference fire-retardant-treated wood in section 2303.2. Fire-retardant wood is any wood product that, when manufactured, is impregnated with chemicals by using pressure or other means and, when tested in accordance with ASTM E84 or UL723, has a listed flame spread index of 25 or less.

As such, natural untreated wood with a flame spread index of 25 or less, which meets NFPA Class A standards, is typically considered fire-resistant or a limited combustible material.

Design Values

Any wood product used in decking, stringer, and beam applications must have established allowable design values and engineered span tables based on required load and wood grade. This information must be based on what specifiers and code officials can rely on.

While it is not mandatory, some designers and building inspectors will request an ICC-ES number for products used in construction. The ICC-ES number correlates to an ICC-ES report, which verifies code compliance without demonstrating through other documentation that the products used meet the minimum standards. Not having an ICC-ES number does not disqualify a product from use. The building inspector may require product documentation demonstrating minimum standards compliance. This is why Tropical Forest Products provides code compliance documentation in an ICC-ES report format.