Specifying Fire Retardant Treated Wood

Lonza Wood Protection is a global leader of innovative technologies that improve the performance of wood, by making it resistant to termites, fungi, mold, moisture, flame spread and smoke development.

Q: What is fire retardant treated wood (FRTW)?
A: The 2015 IBC section 2303.2 defines fire retardant treated wood as 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 E84 or UL 723, 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. Additionally, the flame front shall not progress more than 10 ½ feet (3200mm) beyond the centerline of the burners at any time during the test.

Q: How can I know that a FRTW product meets the building code requirements?
A. Dricon® FRTW, along with other fire retardant treated wood products, should have an Evaluation Service Report indicating compliance with the Acceptance Criteria For Fire-Retardant-Treated-Wood, AC66. The Acceptance Criteria establishes the performance requirements for fire-retardant-treated-wood, including lumber and plywood, to be recognized in an ICC Evaluation Service, LLC (ICC-ES) evaluation service report that confirms that the recognized product is in compliance with model building codes. The Dricon® Evaluation Service Report is ESR-1626.

Q: Some of the most common questions about fire retardant treated wood surround flame spread characteristics and smoke development indices. What is the test and how does it determine what the flame spread and smoke development indices are for a fire retardant treated wood product?
A. The test used to determine flame spread and smoke development values is the ASTM E 84, Standard Test Method for Surface Burning Characteristics of Building Materials. The reduction of flame spread and smoke ratings for FRTW compared to untreated wood equate to improved building safety.

Q: Is substitution between fire retardant products an issue?
A. Not all fire retardant treated products have the same design values and attributes. Therefore, design professionals should always review a product Evaluation Service Report (“ESR”) and reference the ink stamp in the report to make certain all of the required information is included. In addition, some products may be listed in the AWPA Book of Standards. Dricon® for example, is listed as FR-1 in standard P49-15 of the AWPA Book of Standards. Because Dricon® is listed in the AWPA Book of Standards, the stamp should also include “AWPA U1”.

Q: How are fire ratings assigned?
A. Fire ratings (in hours) are typically assigned to doors, walls, or deck assemblies, following testing in accordance with ASTM E 119 and E 136. References such as the Underwriters Laboratories “Fire Resistance Directory” specifically point out that FRTW may be substituted for untreated wood in any rated assembly. The model building codes allow FRTW to be used in noncombustible types of construction in specific instances.

Q: Is Dricon® FRTW protected against termites and fungal decay?
A. Dricon® fire retardant chemical is registered for use as a wood preservative with the U.S. Environmental Protection Agency. Some species of Dricon® FRTW wood also meet the requirements of AWPA Standard U1 Commodity Specifications A (sawn products) and F (plywood), which means that it effectively withstands damage from decay and termites in appropriate applications.

Q: Does Dricon® FRTW come with any kind of warranty?
A. Dricon® FRTW carries three different warranties. The first is a 40-year limited warranty against heat degradation for Dricon® treated wood in roofing systems. Also available is a 40-year preservative limited warranty for building owners. In addition, truss manufacturers can enroll for a 10-year limited warranty on truss lumber as well as for the 40-year roofing system warranty. The full terms of all these warranties can be found at www.wolmanizedwood.com.

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