Quality Technical Bulletin

Fire Retardant Treated Wood (FRT)

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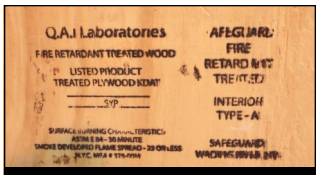
Fire Retardant Treated Wood, or FRT Wood, is on most of our projects...both interior and exterior locations. We all have worked with this wood, however, do we understand how it works, what are the different FRT wood types, and what are the limitations for installation. FRT wood is pressure impregnated to reduce combustibility…designed to char up quickly and protect the wood, allowing for very little flame spread and in turn, the wood will not feed a fire.

Corey Zussman, AIA, NCARB - Director of Quality Management

Fire Treated Identification required to identify the following:

1. Identification of approval agency.
2. Treating manufacturer .
3. Name of treatment material .
4. Wood species.
5. Method of drying (KDAT).
6. Conformance with the standards.
7. *For exterior treated wood, indicate*: "No increase in the listed classification when subjected to the standard rain test (ASTM D2898)".



Interior fire treated wood has two classifications:

A & B

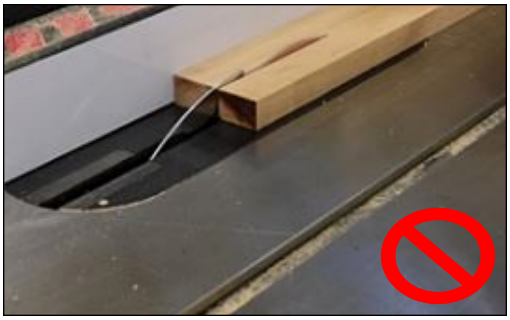
Type A – for interior environments where the relative humidity is less than 95%

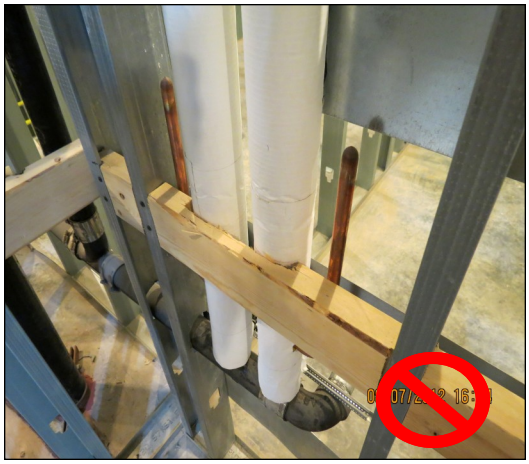
Type B – for interior environments where the relative humidity is less than 75%

Questions to ask:

- What will the Rh be in service?
- Moisture exposure?
- Special strength needed?
- High temperature environment?
- Roofing condition, water based adhesive?

- ❑ Fire Treated Wood is NOT a non-combustible material.
- ❑ Dimensional lumber **CANNOT** be ripped, notched, or milled (or made into stair stringers)…unless a specific hardwood is used, which is not common and must be specially ordered… contact your supplier for available species (if available).
- ❑ Ripping, notching, or milling the dimension lumber will affect the surface burning characteristics…unless completed prior to treatment.
- ❑ Plywood is able to be cut is any direction.
- ❑ Dimensional lumber can be sanded, cross cut, joining cut, and drilled holes.





- ❑ According to the American Wood Protection Association, it is a best practice (although not required by all manufactures), drilled holes and cut ends need to be treated with a preservative, such as copper naphthenate or oxine copper (mostly for exterior use) or a boron-based preservative (for interior uses only). Exceptions can be made when the wood is a thick sapwood species such as Southern pine, has very little heartwood, and appears to be well treated. Copper naphthenate specified in AWPA Standard M4 for field treatment contains 2% copper…*ALWAYS VERIFY WITH YOUR MANUFACTURER and SPECIFICATIONS*.
- ❑ Treated exterior wood could be exposed to intermittent precipitation, as long as it is able to dry out to 19% for lumber or 15% for plywood.
- ❑ Interior treated wood cannot get wet, as the treatment is water soluble.
- ❑ Always protect the wood from precipitation…It is best to cover the wood with a Tyvek type material (to let it breathe) at all times if exposed to inclement weather.
- ❑ Do not use any water based adhesive (think roofing adhesive) on any FRT Wood.
- ❑ Exterior treated wood should NOT be used in attic space environments due to the potential of condensation.
- ❑ Exterior treated wood should not be used in direct contact with the ground.
- ❑ Fire treated Chemicals are NOT hazardous materials…they are generally water soluble salts.
- ❑ Always request a MSDS for your fire treated wood.
- ❑ Sprayed-on or surface-treated FRT Wood is NOT acceptable and will not meet standards.
- ❑ FRT Wood can be painted or stained, however, you must understand the flammability of the coating, which might sustainably degrade the flame retardant characteristics.
- ❑ FRT wood requires hot dipped galvanized, stainless steel, or silicone bronze or copper fasteners (due to the salt content of the treatment...and building code).
- ❑ FRT Plywood CANNOT substitute drywall in a rated partition, unless specifically tested.
- ❑ For dimension lumber and plywood, if used in a structural capacity, should use the values provided by the fire treatment company.
- ❑ Each piece of FRT wood should be marked with "KDAT" = "Kiln Dried After Treatment".

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