

# Weapons against wildfires

When wildfires sweep the western U.S., bone-dry conditions contribute to their start and spread as much as human carelessness.

Construction companies building in wildfire zones have two effective weapons: building codes and fire-resistant materials. The greater the risk and the higher the number of people utilizing the building, the higher the level of fire resistance generally required.

Exterior walls are a concern when a building is being designed to resist fire. To satisfy fire codes for the exterior walls of buildings, builders can choose materials including steel, concrete, cement block, brick and mortar, gypsum wallboard and, in some

cases, fire-retardant treated wood (FRT).

Gypsum and FRT introduce drawbacks, however. Gypsum is fragile, offers little strength and can mold when wet. FRT is engineered to fight flame spread by decomposition of the wood when exposed to heat; yet even before a fire, the chemicals in it can reduce the wood's strength.

Chemicals in the treatment process are designed to form acids when heated, decomposing the wood before it catches fire; unfortunately, this chemical transformation can be activated prematurely by the sun's heat.

One Minnesota-based company, Barrier Technology Corporation, ([www.intlbarrier.com](http://www.intlbarrier.com)), is building fire-resistive exterior walls and roof decks with wood-based structural panels treated not with chemicals but with an environmentally friendly, noncombustible laminate.

The company's structural fire-rated wood panels use a patented, nontoxic, noncombustible coating that releases water in the heat of fire.

The coating, Pyrotite™, consists of materials including magnesium oxide that, when mixed with a salt-water brine and reinforced with fiberglass fibers, forms a noncombustible, ignition-resistant barrier. Two quarts of water per 4- by 8-foot panel become moisture only when exposed to a fire's intense heat. (NAPS)

