

Resources for Fire-Resistant Construction and Retrofitting

Steve Quarles is an advisor at UC Berkeley Cooperative Extension. Check his pages at UCB for an amazing amount of latest information on what makes a fire-resistant building. Start at <http://firecenter.berkeley.edu/quarles/squarles.htm> for links to downloadable booklets and articles, all free. Some of these are big files, so will take some patience with our slow dial-up connections, but very worth it. Don't miss the "**Homeowner's Wildfire Mitigation Guide**" for details on **decks, roofs, siding, vents, windows, plantings, and more**. These articles have thorough discussions of "potential problems" and "possible solutions." Also look for "**Vulnerable Parts of Your Home.**"

Here's a helpful online article from *Fine Homebuilding Magazine*:

<http://www.taunton.com/finehomebuilding/how-to/articles/fire-resistant-details.aspx>

Article is a little old, but still useful: "**Fire-Resistant Details: Studying the houses that survived the 1993 Laguna Beach fire storm yields lessons in building to withstand the heat**"

Taunton.com also has more recent articles, but charges \$6/month to access. Most useful to this topic:

"Fire-Wise Construction: Building strategies that may save your house from a wildfire."

"Making Storm Shutters" provides an excellent simple scheme for shutters that could be made with 3/4" plywood, hardboard, or MgO board for fireproofing windows.

New building materials are coming onto the market that hold much promise. Among the more intriguing are products made of magnesium oxide, including 4x8 boards and cements. **MgO products are fireproof, waterproof, moldproof, bugproof, crackproof, have considerable shear strength, and don't transmit heat.** At this time, MgO products cost more than conventional, but prices are dropping as they become more available. If nothing else, MgO boards should make great fire shutters. When working with it, wear a respirator — don't breathe the dust!

These are the two main companies importing boards so far. (We're looking for an importer on the west coast):

Dragonboard: <http://www.dragonboard.com/>

Mag-Board: <http://www.mag-board.com/>

Grancrrete, a MgO cement/stucco mix, is now marketing nationally via <http://grancrrete.net>. Look for local Bay Area company to come out soon with competing California Concrete. A caveat when working with MgO stucco: it sets extremely fast, depending on ambient temperature. Mix and apply small batches, and not on hot days. Wear a respirator — don't breathe the dust!

There's also a new generation of **fireproof paints and retardants**, and many claim to be nontoxic. This is one possible solution for vulnerable wood decks and wood siding. For example, see:

<http://www.hytechceramics.com/intumescent.html>

<http://www.firefree.com/firefree88.htm>