

# “Block”-ing the Fire

Building with Concrete Block  
Can Mitigate Home Fire Disasters

By Greg Smith



*We have willingly let fire into our homes for years. Whether we’re using it to cook a family feast, filling our homes with aromas from scented candles, or sharing a quiet moment with loved ones in front of the fireplace, fire has always been part of everyday life. Unfortunately, some of these moments have also unwittingly let fire consume our homes.*



Home fires are the greatest cause of fire-related deaths, injuries, and property loss in the U.S. From 2015-2019 the U.S. averaged nearly 350,000 residential fires (single and multi-family) per year that resulted in more than 2,600 deaths and 11,000 more people injured, and more than 7.3 billion dollars in damage. \*

To help avoid becoming a fire victim, homeowners and renters need to implement fire prevention measures in their homes. However, accidents happen and even the best measures are not often enough to stave off a catastrophic fire event. The construction material of the home plays a large part in keeping residents and their loved ones safer should disaster strike.

Houses and apartment buildings designed and built with concrete block are more likely to remain standing than structures built with wood or steel. Concrete will not burn like wood or bend and soften like steel. In numerous fire tests, concrete walls withstood gas flames and temperatures of up to 2,000 degrees Fahrenheit for as long as four hours without failing structurally. In contrast, wood frame walls typically collapsed in less than an hour.

Concrete can also mitigate the spread of fire throughout a home. In the same tests, concrete block walls did not allow flames to pass through from one compartment to another. They also did not allow enough heat to pass through to the next compartment to start a fire for more than 4-5 hours, in contrast to wood frame which allowed this heat exchange to happen in an hour or less. This factor is extremely

important in apartment fires where flames can spread through a wood frame structure in minutes.

### *Wildfires: When the Fire Comes to Your Home*

Wildfires are a rapidly growing problem in the U.S. as more people are moving out of cities to build homes and businesses in areas where structures intermingle with forests and wildlands, creating wildland/urban interfaces (WUI). More than 46 million homes in 70,000 communities are at risk of WUI fires. During the last 15 years, six of this century's top 10 most damaging U.S. single fire events have occurred in WUI communities. Since 2000, more than 38,000 homes have been lost to WUI fires in the U.S. \*

In Florida, not only does the state experience the second highest number of wildfires in the nation, but almost one-third of the population now lives in outlying WUI areas. \*\* When building a new home in a WUI location, it's imperative that homeowners work with their builders and designers to incorporate wildfire risk-reduction methods into the construction design and process. This includes building with concrete block and concrete roof tiles (Class A fire rated). The use of these fire-resistant materials will greatly diminish home ignitions when a wildfire is nearby. Not only will the home be safer for homeowners and their families, but it will also allow for firefighters, who are often overwhelmed during a major wildfire event, to focus on containing the wildfire rather than fighting structure fires.



Homebuyers, builders and designers can learn more about the fire resistance benefits of concrete block by visiting [BlockStrong.com](http://BlockStrong.com).

Block Strong is a partnership between Florida Concrete & Products Association, Inc. and Florida Concrete Masonry Education Council, Inc. The awareness program's primary mission is to help consumers, construction professionals and designers understand the vital link between quality building materials and the health and safety of those people living in the homes and structures that they design and build. Block Strong also serves as an information source for aiding prospective homebuyers as they go through the various steps of the home-buying journey.

\*Source: National Fire Protection Agency

\*\*Source: Florida Forest Services

