

Roofing for Extreme Weather | Earth911.com

Roofing for Extreme Weather



Share this idea!

It goes without saying that a roof should protect us from the elements. Roofing materials are rated for resistance to fire, hail, wind, and freezing.

Earth911 has already identified some of the [greenest roofing manufacturers](#) around, and most of their products meet standards for each of those measures. But if you are replacing your roof due to weather damage, you probably want to know how your next roof will hold up to your region's specific extreme weather events.

Fire Resistance

[Fire ratings](#) for roofs are classified Class A, Class B, or Class C, with Class A providing the highest resistance to fire. Unrated means the material cannot meet classification requirements. No home is fireproof, but a combination of [fire-resistant landscaping](#) and fire-rated roofing might buy your home some extra time in an emergency. If you live in an area that is subject to wildfires you should not settle for less than a Class A rating.

Fortunately, most common roofing materials meet Class A rating standards. The most notable exception is untreated wood shakes, which are not permitted by building codes in many areas prone to wildfires. Even wood shakes can achieve a Class B rating when treated with fire retardants. These chemicals are toxic, however, so green-minded homeowners might prefer to use a different roofing material. Several manufacturers in our [Sustainable Roofing Buyers' Guide](#) manufacture Class A, environmentally friendly shingles that resemble wood shakes.

Hail Resistance

In some parts of the country, hailstorms are virtually unheard of. Even where hail is more common, 90 percent of hail is smaller than a golf ball. But it doesn't take a golf ball to cause roof damage. The [UL 2218](#) classification sets a national standard for roof impact

resistance. Materials are rated from Class 1 through 4, the toughest. The price premium for “Class IV Impact Resistance” is 10 to 20 percent. Lower insurance premiums and rebates may balance the cost.

With the possible exception of those making clay tiles, all manufacturers in our [Sustainable Roofing Buyers' Guide](#) offer Class 4 rated materials.

Wind Resistance

Whether it's hurricanes, tornadoes, or just seasonal windstorms, high winds are a common concern. Building design and good [installation techniques](#) go a long way towards making a roof more wind resistant. But material choice plays a part, too. Some metal roofing can withstand winds of more up to 150 miles per hour.

Heavy clay and concrete tiles can also be an exceptional choice. One of the most sustainable roofing manufacturers, [Eagle Roofing](#), makes concrete tiles that can withstand 180 mph winds.

Freezing Resistance

As with wind resistance, building design and installation techniques are critical for cold climate roofing. [Asphalt](#) is installed differently in cold weather and [metal](#) requires special considerations for high snow loads. A grade 1 rating for [ASTM 1167](#) means that a clay tile is made to withstand freeze-thaw cycles.

Many clay and concrete tiles do not achieve Grade 1 and are recommended only for warmer climates where freezing is rare.

Check the Specs Before You Order

Most roofing manufacturers offer a variety of products that do not perform equally. Always check the specifications sheet of the specific roofing product before ordering to make sure it meets the standards you are concerned about.

You Might Also Like...



Sustainable Roofing Buyers' Guide

For most people, buying a new roof is one of ...Gemma AlexanderApril 8, 2019



How Climate Modeling Helps Us Understand Climate Change

This article is part of a series of Arctic ice ...Earth911February 19, 2019



Earth911 Quiz #46: Extreme Weather & Wildfire Everywhere

The Northern and Southern Hemispheres alike are experiencing extreme weather ...Earth911January 24, 2019