

Shingles and Other Roofing Products



Asphalt shingles

possess an overwhelming share of the U.S. steep-slope roofing market and can be reinforced with organic or fiberglass materials. Some asphalt shingles are tested and approved for impact resistance and wildfire resistance.



Tile (clay or concrete)

is a durable roofing material that is especially popular in the Southwest and in Florida. Tile is heavy and available in a variety of shapes and colors. If you are replacing another type of roof system with tile, be sure to verify that the home's structure can support the load.



Wood (shingles and shakes)

are made from cedar, redwood and other woods. While these types of roof coverings are popular in California, the Northwest and parts of the Midwest, some local building codes limit the use of wooden shakes and shingles because of concerns about fire resistance.



Slate

is quarried in the U.S. and is available in different colors and grades. Slate is considered virtually indestructible but is more expensive than any other roofing material. Installation of slate requires special skill and experience.



Metal

comes in two types of roofing products: panels and shingles. Metal shingles typically are intended to simulate traditional roof coverings. They are lightweight and have a greater resistance to adverse weather.

Did You Know?

- Most asphalt roofing shingles are not rated to withstand winds above 60 miles per hour—well below the minimum hurricane speed of 74 mph.
- Slate and tile roof coverings last up to three times longer than shingles; however, they are more prone to hail damage.
- Wooden shakes and shingles are not considered fire resistant unless they are treated with fire retardant by product manufacturers. "Class A" roofing materials have the highest resistance to fire that originates from outside the residence.

KIDS' CORNER

Did you know that hail is one of the most destructive weather elements?

Hail is especially damaging when it falls from the sky at a high rate of speed and makes dings and dents in a home's roof. Sometimes hail does so much damage the roof has to be replaced. Hail forms when strong updrafts in thunderclouds cause raindrops to form layers of ice called "stones." You can see how this works, right in your own kitchen!

Here's what you'll need:

- Square or rounded ice cube (or a real hailstone, if available)
- Hand pumped water sprayer filled with water
- A freezer
- Serrated knife (ask an adult to help!)

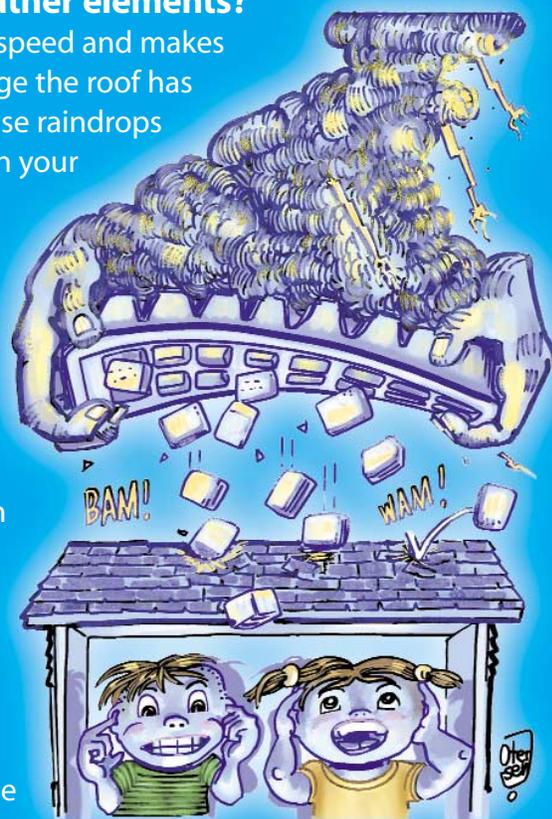
Getting Started:

Step 1. Place the ice cube or hailstone on a small plate and set it in the freezer for five minutes

Step 2. Take the plate out and spray the "hailstone" with water. Put it back in the freezer.

Step 3. Continue the spraying and freezing process every five minutes for about an hour.

Step 4. Remove the "hailstone" from the freezer and ask mom or dad to carefully cut it in half with the knife to see different layers of ice inside the hailstone.



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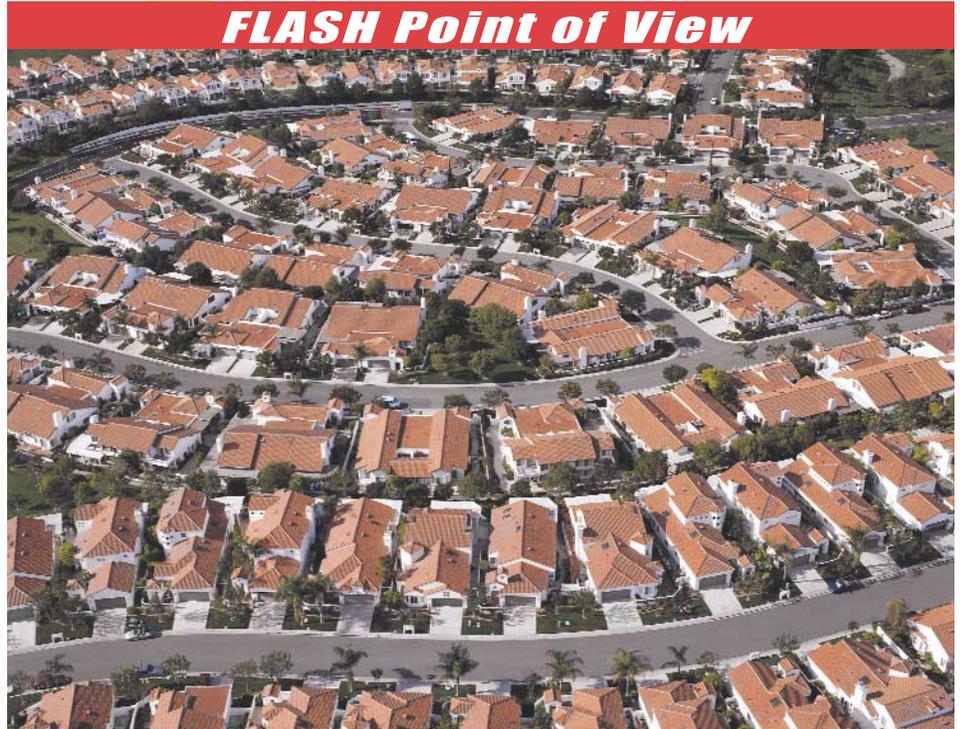
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Dedicated, toll-free, home safety hotline (877) 221-SAFE

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FLASH Point of View



Stay On Top Of Your Roofing Needs

"Whether planning to re-roof in 10 years or this year, every homeowner can benefit from a proactive maintenance strategy that identifies potential problems before they become disasters."

Story Inside

FLASH Links

Check out these Web sites for more information on disaster-resistant roofing techniques, products and services:

www.blueprintforsafety.org - FLASH's Blueprint for Safety offers "code-plus" construction guidelines for protecting new and existing homes against flood, wildfire and windstorms.

www.nrca.net - The National Roofing Contractors Association educates consumers on what to look for when choosing a new roof and a roofing contractor.

www.wellconnectedhouse.com - The Well-Connected House™ from Simpson Strong-Tie explains the important role of structural connectors for protecting a roof from wind damage.

www.ibhs.org - The Institute for Business & Home Safety publications provide information on protecting roofs from hail and other weather perils, as well as a listing of manufacturers of Class 4-rated roofing products.

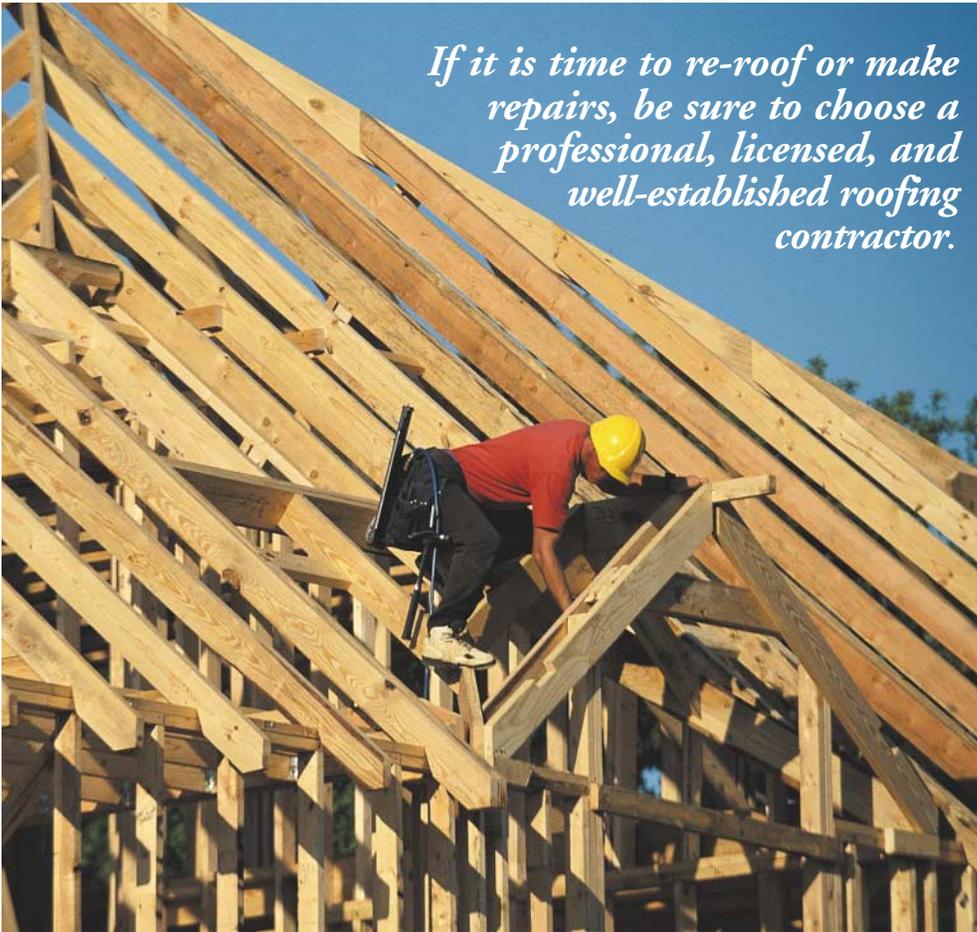
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By Bill Good
National Roofing
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Stay On Top Of Your Roofing Needs

If it is time to re-roof or make repairs, be sure to choose a professional, licensed, and well-established roofing contractor.



Flooding, hail, high winds, and lightning cause catastrophic damage to homes each year. In 2001, Tropical storm Allison caused \$2.5 billion in damage in Florida and three other states. Many times the costliest storm damage happens to the roof — a home's first line of defense from the elements.

Whether planning to re-roof in 10 years or this year, every homeowner can benefit from a proactive maintenance strategy that identifies potential problems before they become disasters. Even the smallest leak or curling shingle can signal a big problem if left unchecked. Misplaced nails in the roof deck or inadequate roof-wall connections are hazards that are easily identified —

but only if the homeowner, contractor or inspector knows what to look for. If it is time to re-roof or make repairs, be sure to choose a professional, licensed, and well-established roofing contractor.

Discuss the best options for disaster-resistant materials and construction methods, such as appropriate nail sizes and installation patterns; a secondary water barrier to prevent seepage, commonly referred to as “peel and seal”; and “Class 4” roof coverings for maximum impact resistance against hail and wind-borne debris; and “Class A” roof coverings for fire resistance.

Local building codes set a solid minimum safety standard, but do not guarantee that a home's roof will be built with the highest level of protection available. Likewise, some roofing products that meet current code requirements may not withstand a severe weather event.

For these reasons, roofing professionals generally agree that an effective roof system requires proper design, quality materials, quality installation, regular inspection and preventative maintenance. Shopping for the best materials, researching the most effective installation techniques and establishing a relationship with a professional roofing contractor are some of the best ways to achieve effective, long-term and life-saving roof system safety.

Building a

Blueprint for Safety

5 Steps to a Disaster-Resistant Roof

The roof is by far the largest and most vulnerable structure on any house. It takes a beating from hail, rain, sun and wind throughout the year, as well as the occasional lightning strike or fallen tree branch. Despite these everyday hazards, a new roof system usually lasts about 20 years depending on which type of roof covering is installed. Some types, such as slate, clay tile and certain metal (i.e., copper) systems can last longer.

Homeowners and homebuilders can improve the useful life of a home's roof by following a few simple steps to make it more disaster-resistant. The following techniques can be used during roof installation on both new and existing homes, and are best performed by a licensed, professional roofing contractor.

Step 1

Secure Wall-to-Roof Connections

Install hurricane "straps" or "clips" at every wall-to-rafter (roof joist) connection to reinforce the roof. These connections are critical in holding the roof together and will dramatically increase the home's overall wind resistance. Pay special attention to the reinforcement of gable end connections, which are more likely to fail in high wind.

Step 2

Reinforce the Roof Sheathing

Install a roof deck made of solid plywood (minimum 5/8" thickness— not oriented strand board-OSB) to maximize high wind resistance. 10d common nails should be used to secure the sheathing, nailed every four inches along the panel edges and every

six inches in the field of the plywood panel.

Step 3

Create a Secondary Water Barrier

Install self-adhering flashing tape or modified polymer bitumen strips (referred to as "peel and seal") to help keep out rain in the event the roof covering blows off during severe weather. Apply the tape to all joints on the plywood deck sheathing.

Step 4

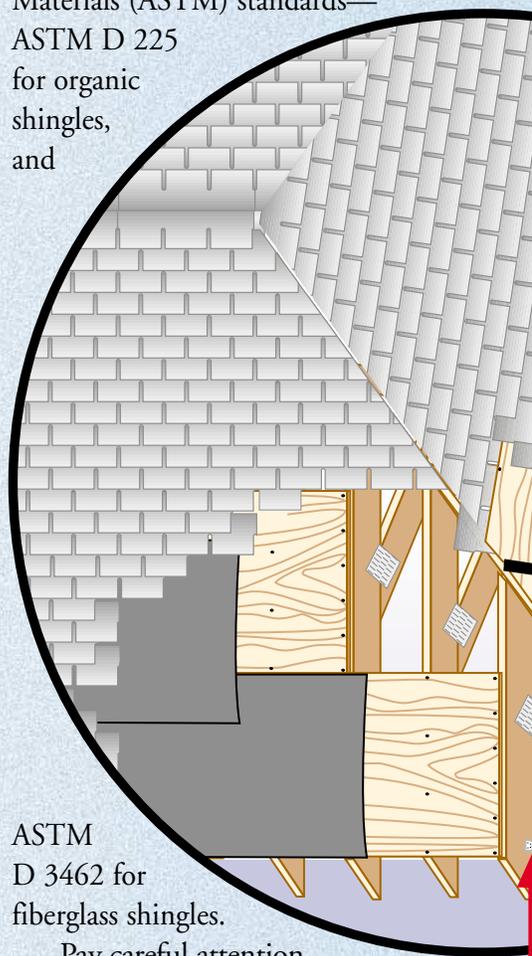
Install the Roofing Underlayment

Install one layer of #30 underlayment (sometimes called "felt paper") over the plywood roof decking and secondary water barrier tape. One layer of #90 underlayment is recommended for tile, slate or metal roof coverings.

Step 5

Select an Impact-Resistant Roof Covering

Install a "Class 4" impact-resistant roof covering ("Class A" for wildfire resistance). When installing asphalt shingles, choose a variety that complies with American Society for Testing and Materials (ASTM) standards— ASTM D 225 for organic shingles, and



ASTM D 3462 for fiberglass shingles.

Pay careful attention to the manufacturer's warranty— in some cases, the length of the warranty may have been established as a marketing tool without appropriate technical research or field-testing.

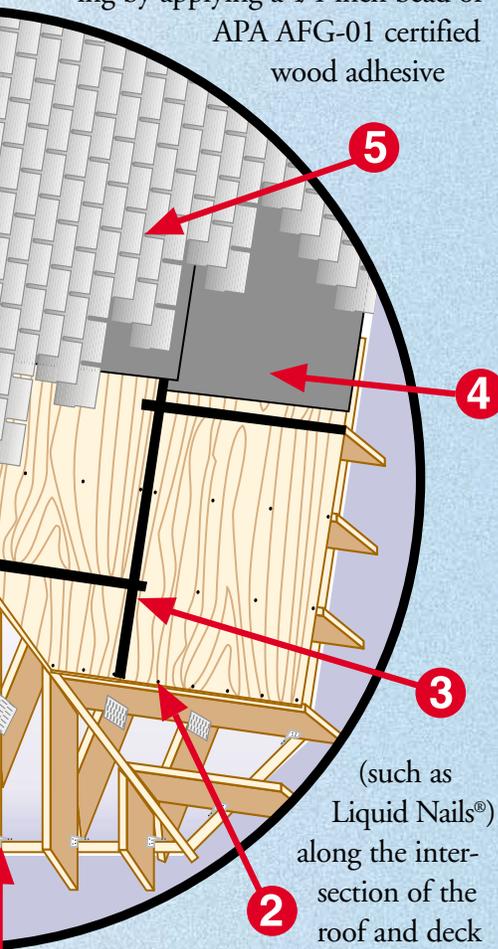
Not Ready to Re-Roof? What to Do When a New Roof is Years Away

Even owners of newly-constructed homes can take extra measures to protect

their roof from natural hazards. While some roof reinforcements are best left to a professional roofing contractor, others are do-it-yourself projects that are easily completed over a weekend.

Fix It Yourself

- Add protection to your roof sheathing by applying a 1/4-inch bead of APA AFG-01 certified wood adhesive



AND roof support elements on both sides of the beam. This can

increase the wind uplift resistance of your roof by up to three times more than nail-secured sheathing alone, but should only be used on roofs older than one year.

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- Perform a check-up on your roof system twice a year—fall and spring—to identify potential problems. Look for shingles that are buckling, curling or blistering; loose material or wear around chimneys, pipes and dormers; excessive amounts of single granules in gutters. Granules give shingles weight and protect against ultraviolet rays. If you find problems, call a licensed roofing contractor.
- Use the handy form below to track your roof check-ups each fall and spring.

Fix It with a Contractor

- Install hurricane straps from inside or outside the attic. Even if re-roofing is years away, it is possible for roofing professionals to access and reinforce an existing home's roof-to-wall connections with properly designed hurricane straps and clips.
- Spray on structural foam to the underside of the roof deck/rafters. This technique requires adequate attic access.

Ask FLASH

Choosing a Contractor: "How do I find a reputable contractor in my area? And what should I look for?"



The National Roofing Contractors Association offers a toll-free referral network to help you locate professional member contractors in your area. Call toll-free 1-800-USA-ROOF or log on to www.ncra.net. The tips below will help you get started.

- **Check the contractor's business licensing, bonding and insurance coverage. Ask to see liability coverage and worker's compensation certificates, and make sure these policies are in effect while the roofing work is being done.**
- **Verify a permanent place of business (including a physical address, reliable telephone number and tax identification number).**
- **Investigate references and possible complaints from past customers, Better Business Bureau and Department of Business and Professional Regulation.**
- **Insist on a detailed, written proposal before signing a contract. Examine it for complete descriptions of work specifications, start and finish dates and payment procedures.**
- **Carefully review and understand product warranties and watch for conditions that would void it.**
- **Seek out bids from at least three or four contractors, and be skeptical of the drastically low bid. Estimates that seem too good to be true usually are.**

ROOF CHECK-UP CHART

	SPRING 2002	FALL 2002	SPRING 2003	FALL 2003
CLEANED GUTTERS				
CHECKED SHINGLES				
INSPECTED AROUND CHIMNEY, PIPES AND DORMERS				
CHECKED INTERIOR WALLS AND CEILINGS FOR WATER DAMAGE				
CALLED A PROFESSIONAL ROOFING CONTRACTOR				