



FORTIFIED

https://fortifiedhome.org/

The FORTIFIED construction method is a voluntary construction standard backed by decades of research, to help protect against sever weather.

When severe weather strikes, a FORTIFIED Roof keeps the wind and rain out, preventing a cascade of damage that can destroy your home and belongings. FORTIFIED Roof was specifically designed to prevent damage that commonly occurs during high winds, hurricanes, hailstorms, severe thunderstorms, and even tornadoes up to EF-2. No matter what type of roof you have-shingles, metal, or tile-the following FORTIFIED Roof requirements will make your home stronger.

STRONGER EDGES

Roof damage often begins when wind gets underneath the roof edge and begins ripping it away from the home. To help protect this vulnerable area, FORTIFIED requires specific materials and installation methods, including a wider drip edge and a fully adhered starter strip, that when used together create a stronger system.

SEALED ROOF DECK

If wind rips off your roof covering—such as shingles, metal panels or tiles—it exposes the wood beneath and allows water to pass through the gaps and enter your home. FORTIFIED requires roof decks to be sealed to prevent this type of water damage.

BETTER ATTACHMENT

Instead of common smooth nails, FORTIFIED requires ring-shank nails, installed in an enhanced pattern, to help keep the roof deck attached to your home in high winds. In fact, using ring-shank nails nearly doubles the strength of your roof against the forces of winds.

IMPACT-RESISTANT SHINGLES

In hail-prone areas, FORTIFIED requires shingles tested by IBHS to show they can withstand hail up to 2 inches in diameter. These shingles outperform typical Class 4 shingles when tested against realistic hailstones and will better protect your home.

CALL TO ACTION

Grow your business and protect your community from severe weather. Roofing is a competitive business. A reputation for providing / installing storm-ready roofs will help set your company apart from the crowd. Use the FORTIFIED standard, which is based on decades of research by the Insurance Institute for Business & Home Safety (IBHS), to give your customers a roof that's proven to withstand severe weather.

<u>NEWS</u>

In 2024, all regulated Insurance Companies will be required to provide a discount when a Fortified designation is achieved.

◆ This document should serve as a guide only. Refer directly to Fortified documents and local building codes.



PRODUCT CHEKLIST GUIDE: Steep Slope Roofing 2:12 or Greater

ROOF SHEATHING: Plywood recommended in lieu of OSB					
7/16"		Max. Roof M	ember Spac	ing: 24" O.C. fo	r ASCE 7-10
15/32		High Wind o	ember Spac only	Ing: 24 O.C. to	r ASCE 7-16
3/8"		Max. Roof M	ember Spac	ing: 16" O.C. fo	r ASCE 7-10 and 7-16
NAILS / Roof Sheathing Installation 8d Ring-shank Nails: Roof deck nailed with 0.113-in. x 2 3/8" Round Head (Center or Off Center acceptable) (No Clipped-Head)					
 SEALING THE ROOF DECK Option 1: Roof Deck Flashing Tape and Synthetic: Roof Deck Flashing Tape, meeting 4" ASTM D1970 or 3 ¾" AAMA 711- 13, Level 3 Synthetic underlayment with minimum of ASTM D4533 / 15 lb tear strength and ASTM D5035 / 20 lb tensile strength and pass the ASTM D4869 liquid water transmission test. 					
 Option 2: 2 Layers of Underlayment, meeting one of the following: 30# Felt: ASTM D226 Type II or ASTM D4869 Types III or IV or ASTM D6757 Synthetic underlayment with minimum of ASTM D4533 / 15 lb tear strength and ASTM D5035 / 20 lb tensile strength and pass the ASTM D4869 liquid water transmission test. 					
 Option 3: Self-Adhered Membrane, meeting ASTM D1970 o Recommended bond break between membrane / shingles o Confirm adequate ventilation for this application is met. 					
Option 4: Apply ASTM or TAS tested 2-part, spray polyurethane foam adhesive to the underside of the roof deck in accordance with FORTIFIED Standard Detail F-SRD-1 "Roof Deck Attachment and Sealed Roof Deck from Within Using Spray Foam."					
 FLASHING Install proper flashing at all penetrations and roof/wall intersections, at valleys, at gables and at eaves. Refer to FORTIFIED General Flashing Guidelines for Steep-Sloped Roofs for more Information. Flashings shall be installed at all places where the roof covering is interrupted or terminated, including, but not limited to the following: Roof system perimeters and edges / Roof pitch changes / Roof penetrations / Walls / Chimneys / Expansion joints / Valleys / Drains 					
<u>DRIP EDGE</u> 26 gauge S	<u>E</u> Steel				

26 gauge Steel

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<u>STARTER</u>

Starter strips adhered at the eave and rake.

ASTM D1970 Fully Adhered (Peel & Stick), or

- Single Strip Starter Installation: At Eave or Rake Set shingles in a minimum 8"-wide strip of compatible flashing cement. Maximum thickness of flashing cement shall be 1/8". Fasten starter strips parallel to the eaves along a line above the eave line according to the manufacturer's specifications. Position fasteners to ensure they will not be exposed under the cutouts in the first course. Starter strips and shingles must not extend more than 1/4 in. beyond the drip edge.

FLASHING CEMENT

Each shingles course at rakes shall be set in a minimum 8"-wide strip of compatible flashing cement. Maximum thickness of flashing shall be 1/8". Fasten shingles at rakes according to the manufacturer's specifications. Shingles must not extend more than 1/4". beyond the drip edge.

CAP NAILS

0.083 Diameter with 1" Diameter Cap with Length to penetrate a minimum of ¾"

SHINGLES

Asphalt shingles must be ASTM D3161 (Class F) or ASTM D7158 (Class H) rated and be installed with six nails per high-wind installation instructions.

ATTIC VENTS and COVERS: Hurricane Designation Only

- Ridge and off-ridge vents must be TAS 100(A) rated and anchored to the roof in compliance with manufacturer recommended installation for high winds.
 - Gable end vents must have removable shutters in accordance with FORTIFIED Standard Detail F-GS-1 "Gable Vent Shuttering" (refer to Appendix A), and homeowner must be made aware that installation of shutters is temporary and that shutters must be removed once the hurricane threat has passed.

Designation Requirements for FORTIFIED Hail Supplement Only

Asphalt shingles must have an IBHS Roof Shingle Hail Impact Rating of "Excellent" or "Good." For asphalt shingle products that have not yet been tested by IBHS and therefore do not appear on the IBHS Impact Ratings List, documentation must indicate that the products are polymer-modified and have either a UL 2218 Class 4 rating or FM 4473 Class 4 rating to be eligible.

PHOTOVALTAIC (PV) SYSTEMS

Letter of compliance required from professional engineer indicating that connections and installation of the PV system meet the design intent, and that system has been appropriately designed. All roof penetrations must be sealed and flashed in accordance with the PV system and roof covering manufacturer's requirements.