



# Sealed Roof Deck for Wood Shake and Shingle Roof Systems

## Technical Bulletin FH 2021-03

### First Release:

November 9, 2021

### Prepared by:

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Director, FORTIFIED Roof

### Applicable Standards:

FORTIFIED Home™–Hurricane  
FORTIFIED Home™–Hurricane & Hail  
FORTIFIED Home™–High Wind  
FORTIFIED Home™–High Wind & Hail

### Applicable Designation Level:



# FORTIFIED Home™ Approved Sealed Roof Deck Options for Wood Shake and Shingle Roof System Installations

## Introduction

The FORTIFIED Program recognizes the Cedar Shake and Shingle Bureau (CSSB) as the leading authority on the grading, installation and maintenance of wood shake and shingle roof systems and acknowledges best practices for the installation of wood shake and shingle roofing systems per [the current version of the CSSB New Roof Construction Manual](#). Therefore, FORTIFIED Roof designations for wood shake or shingle roof systems shall be installed in accordance with best practices found in the latest version of the CSSB New Roof Construction Manual and the roof cover manufacturer’s product approval. In case of conflicts, the more restrictive installation methods will apply.

## Acceptable Sealed Roof Deck (SRD) Applications with Wood Shakes/ Shingles

After the roof sheathing has been fastened per FORTIFIED requirements, the next step toward FORTIFIED Roof designation is selecting a FORTIFIED approved SRD method and material that is compatible with the intended roof system. Currently, there are two FORTIFIED approved SRD methods utilizing underlayment materials that are compatible with wood shake and shingle roof covers per CSSB guidance:

### Option one: Seam Tape and One Ply of Organic Felt ([Detail F-SRD-2](#))

1. Tape seams between roof sheathing that forms the roof deck. There are two material options for taping the seams on the roof deck:
  - Material Option 1: Apply an ASTM D1970 compliant self-adhering polymer-modified bitumen flashing tape, at least 4 in. wide, directly to the roof deck to seal the horizontal and vertical joints in the roof deck.



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- Material Option 2: Apply an AAMA 711-13, Level 3 (for exposure up to 80°C/176°F) compliant self-adhering flexible flashing tape at least 3¾ in. wide directly to the roof deck to seal the horizontal and vertical joints in the roof deck.
2. Next, apply a code-compliant ASTM D226 Type II (#30) or ASTM D4869 Type IV (#30) underlayment over the self-adhering tape.
    - These underlayment's must be attached using annular-ring or deformed-shank roofing fasteners with minimum 1-in.-diameter caps (button cap nails) at 6 in. o.c. spacing along all end and side laps and in the field, two equally spaced rows 12 in. o.c. between the side laps. Felt horizontal overlaps must be a minimum of 4 in. and end overlaps must be a minimum of 6 in.

### Option two: 2-Ply Organic Felt ([Detail F-SRD-3](#))

Two (2) layers of ASTM D226 Type II (#30) or ASTM D4869 Type IV (#30) underlayment shall be installed in a shingle fashion, lapped 19 in. on horizontal seams (36-in. roll), and 6 in. on vertical seams.

**NOTE:** Be sure to check product labeling carefully. Not all products labeled ASTM D4869 are Type IV. Look for ASTM D4869 felt that is labeled Type IV. ASTM D4869 Type I or Type II will NOT be accepted.

## Additional Considerations

### Wood Shake roofing felt system interlay ([Page 4 of the 2020 CSSB New Roof Construction Manual](#))

- The CSSB recommends using an 18" wide strip of ASTM D226 Type II or ASTM D4869 Type IV roofing felt laid over the top portion of shakes and extending on to the sheathing.

## Compliance Verification Requirements

### Flashing Tape

- Manufacturer's data sheet showing the selected product listed as either:
  - ASTM D1970 compliant self-adhering polymer-modified bitumen flashing tape or
  - AAMA 711-13, Level 3 compliant self-adhering flexible flashing tape.
- One (1) photo of tape label showing compliance with the standard (as described above)
- Four (4) overall photos (one from each elevation) after seams are taped



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### Underlayment

- Manufacturer's data sheet showing the selected product listed as either:
  - ASTM D226 Type II, or
  - ASTM D4869 Type IV organic felt
- One (1) photo of organic felt underlayment label showing compliance with the standard (as described above)
- Four (4) overall photos (one from each elevation) after underlayment/anchor sheet is installed.
- Two (2) closer photos showing the underlayment/ anchor sheet nailing pattern

### Additional References

- **CSSB 2020 New Roof Construction Manual**  
<http://www.cedarbureau.org/installation/roof-installation-manual/>
- **CSSB 2020 Felt Bulletin**  
<http://www.cedarbureau.org/wp-content/uploads/2020/05/Felt-bulletin-2020.pdf>