



Roofing Over Self-Adhered Membranes

Technical Bulletin FH 2022-05

First Release:

August 3, 2022

Prepared by:

Mark Zehnal
Director, FORTIFIED Roof

Mary Uher
FORTIFIED Field Services Director

Julie Lowrey
FORTIFIED Director of Engineering

Applicable Standards:

FORTIFIED Home™—Hurricane
FORTIFIED Home™—High Wind

Applicable Designation Level:



Requirements for Re-Roofing Over Existing Self-Adhered Membranes

Introduction

The use of a self-adhered polymer-modified bitumen membrane complying with ASTM D1970 is one of several options to seal the roof deck accepted by the FORTIFIED Program (Reference FORTIFIED Standard Detail F-SRD-4 as shown in Figure 1). A significant benefit of self-adhered membranes over felt or synthetic underlayment is that in the event the roof cover is lost during high winds, a properly installed self-adhered membrane will most likely stay in place while mechanically fastened felt or synthetic underlayment have the potential to become detached from the roof. However, concerns have been raised that since these products adhere directly to the roof deck, it is not possible to easily remove them without causing damage to the roof deck, which creates potential challenges when re-roofing. This technical bulletin is intended to provide guidance on FORTIFIED-compliant sealed roof deck methods for re-roofing homes with an existing self-adhered membrane.

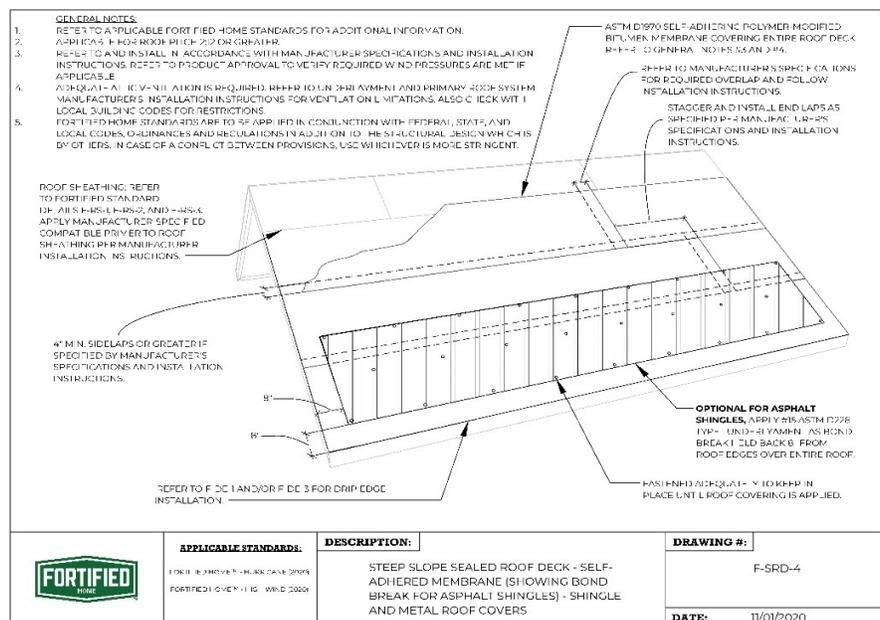


Figure 1. Self-Adhered Membrane SRD Method – FORTIFIED Standard Detail F-SRD-4



Technical Bulletin FH 2022-05

First Release:

August 3, 2022

Prepared by:

Mark Zehnal
Director, FORTIFIED Roof

Mary Uher
FORTIFIED Field Services Director

Julie Lowrey
FORTIFIED Director of Engineering

Applicable Standards:

FORTIFIED Home™—Hurricane
FORTIFIED Home™—High Wind

Applicable Designation Level:



Re-Roofing Over Existing Self-Adhered Membrane

When re-roofing a home with an existing self-adhered membrane, there are several options for maintaining a sealed roof deck.

Requirements for the Second Layer of Self-Adhered Membrane

The Asphalt Roofing Manufacturer’s Association (ARMA) provides guidance on the removal of self-adhered membrane in their Technical Bulletin, Self-Adhering Underlayment Removal Prior to Steep Slope Re-Roofing:

“Removal of self-adhering underlayment is always recommended in situations in which it can be removed without damaging the deck ... If only one layer of self-adhering underlayment is in place, and it is not possible to remove it without damaging the deck, installation of a second layer of underlayment over the existing membrane may be permissible: Check with the underlayment manufacturer’s installation instructions and local building codes for details. Offset end and side laps in the new and existing underlayment to minimize thickness build-up and ‘feather in’ the new underlayment by extending the new material a minimum of 8” up the slope onto the bare deck. This will reduce the likelihood of problems with drainage and aesthetics. If two or more layers of self-adhering underlayment are in place, all layers should be removed.”

When re-roofing homes with one layer of existing self-adhered membrane on the existing roof deck, FORTIFIED accepts the installation of a second layer of self-adhered membrane as the sealed roof deck for one subsequent re-roofing installation, in accordance with the guidance provided by ARMA, referenced above, provided all the following criteria are met:

- It is approved by the manufacturer of the self-adhered membrane that is being installed and the roof cover manufacturer.
- It is not in conflict with the locally adopted building code.
- The existing sheathing is in good condition with no deterioration or damage.

Technical Bulletin FH 2022-05

First Release:

August 3, 2022

Prepared by:

Mark Zehnal
 Director, FORTIFIED Roof

Mary Uher
 FORTIFIED Field Services Director

Julie Lowrey
 FORTIFIED Director of Engineering

Applicable Standards:

FORTIFIED Home™—Hurricane
 FORTIFIED Home™—High Wind

Applicable Designation Level:



- The existing self-adhered membrane is smooth and clean without granulation or other properties that interfere with adhesion.
- The second layer of self-adhered membrane is installed such that buildup of material thickness at locations such as roof to walls, valleys, and edges (existing starter strips and edge metal must be removed) does not exceed two layers.

Requirements for Two-Ply Felt Installation Over Existing Self-Adhered Membrane

When re-roofing homes with up to two layers of self-adhered membrane on the existing roof deck, FORTIFIED accepts the two-ply felt underlayment method (Reference [FORTIFIED Standard Detail F-SRD-3](#) as shown in Figure 2) as the sealed roof deck for subsequent re-roofing installations provided that nails used to attach the felt underlayment have sufficient length to penetrate through the roof sheathing or not less than 3/4 inch into the roof sheathing.

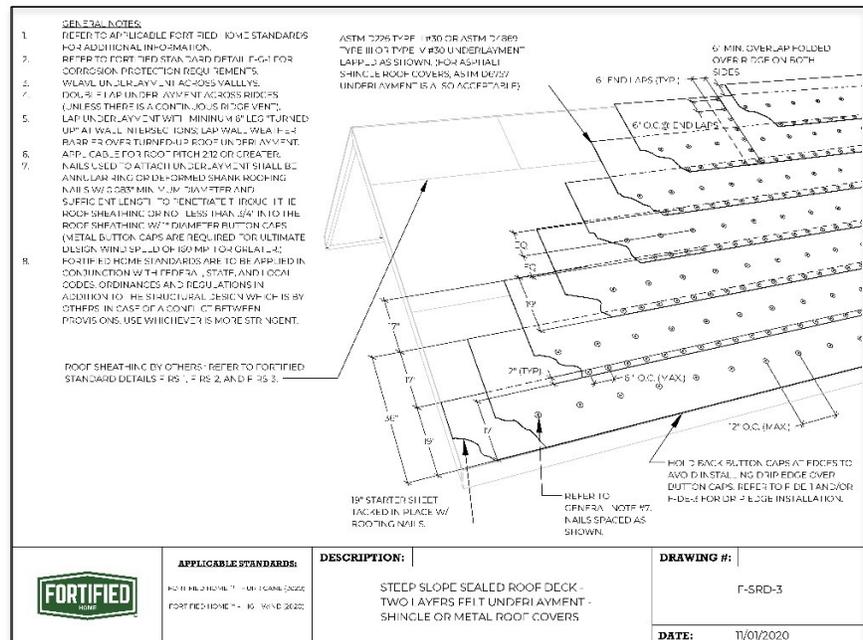


Figure 2. Two-Ply Felt Underlayment SRD Method – [FORTIFIED Standard Detail F-SRD-3](#)

Technical Bulletin FH 2022-05

First Release:

August 3, 2022

Prepared by:

Mark Zehnal
 Director, FORTIFIED Roof

Mary Uher
 FORTIFIED Field Services Director

Julie Lowrey
 FORTIFIED Director of Engineering

Applicable Standards:

FORTIFIED Home™—Hurricane
 FORTIFIED Home™—High Wind

Applicable Designation Level:



What About Closed-Cell Spray Foam?

FORTIFIED does not recommend and does not accept (1) full-fill installation of closed-cell spray foam from within the attic to be used as the fastening or sealed roof deck or (2) the installation of a second layer of sheathing installed on top of the existing roof deck with existing self-adhered membrane. Both of these installations combined with an existing self-adhered membrane on top of the roof deck could create a double vapor barrier leading to water entrapment and moisture damage.

While full-fill insulation is not allowed, closed-cell spray foam may be used at panel seams and roof rafters for attachment of the roof deck per [FORTIFIED Standard Detail F-SRD-1](#).

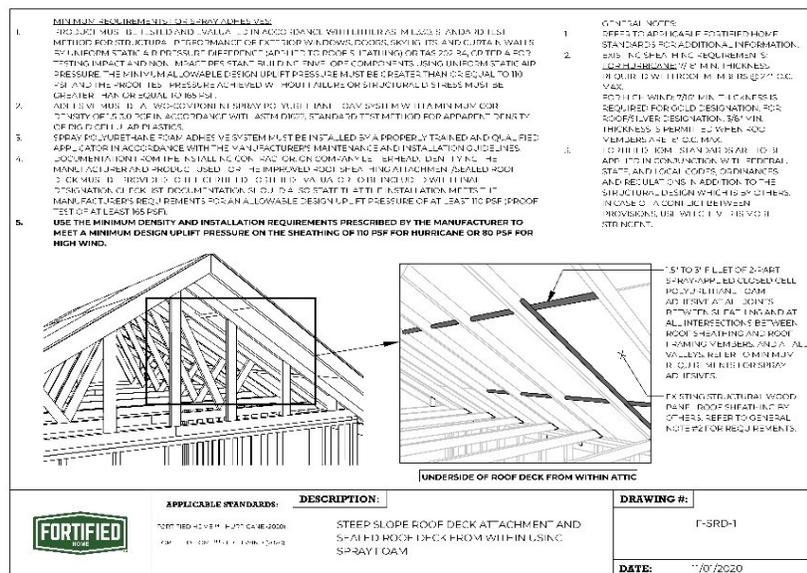


Figure 3. Closed-Cell Spray Foam Method – [FORTIFIED Standard Detail F-SRD-1](#)

Verifying the Condition of the Existing Roof Deck

Existing self-adhered roof membrane will hide the top of the roof deck along with any damage that may be present. Because of this, the condition of the existing roof sheathing will need to be assessed from within the attic to identify any damaged or deteriorated decking. Replace damaged roof decking or roof structural members per section 4.3 of the 2020 FORTIFIED Home™ Standard.



Technical Bulletin FH 2022-05

First Release:

August 3, 2022

Prepared by:

Mark Zehnal
Director, FORTIFIED Roof

Mary Uher
FORTIFIED Field Services Director

Julie Lowrey
FORTIFIED Director of Engineering

Applicable Standards:

FORTIFIED Home™–Hurricane
FORTIFIED Home™–High Wind

Applicable Designation Level:



Compliance Verification Requirements

In addition to all standard sealed roof deck documentation requirements (refer to the [Documentation Requirements](#) checklist), the following documentation is required for re-roofing over existing self-adhered membrane:

- Four overall photos (one from each elevation) showing the condition of the roof after the roof cover is removed.
- Four photos showing the condition of the existing sheathing from within the attic.
- Roof deck attachment and fastener type verification per the Documentation Checklist and [Technical Bulletin FH 2022-01](#).
- For addition of a second layer of self-adhered membrane over an existing first layer, the following documentation is also required:
 - Self-adhered membrane as well as roof cover manufacturer documentation that confirms application over existing self-adhered membrane is acceptable.
 - Four overall photos (one from each elevation) showing installed new membrane before bond break is applied.
 - If bond break is applied, four photos from different eave/rake locations showing bond break held back 8 in. from edge.

Additional References

For additional guidance, refer to the following FORTIFIED Home Standard Details:

- [F-SRD-1 - Sealed Roof Deck - Closed Cell Spray Foam Method](#)
- [F-SRD-3 - Sealed Roof Deck - Two-Ply Felt Method](#)
- [F-SRD-4 - Sealed Roof Deck - Self-Adhered Membrane Method](#)
- [FORTIFIED Home Documentation Requirements](#)