



# TECHNICAL BULLETIN

## Asphalt-Saturated Organic Felt: Cedar Roof Underlayment, Interlayment and Eave Protection

### Overview

This product is used as part of cedar roofing and wall systems. It enhances a system's water shedding ability and helps prevent the intrusion of wind driven snow which can cause ice damming. Sheathing and roofing systems are separate systems; both systems are required by building code and need to be properly designed and installed. Three main types of products need to be considered:

1) underlayment 2) interlayment and 3) eave protection.

### Correct Specifications

The CSSB's **New Roof Construction Manual** shows how to install these products:

### Underlayment/Interlayment

Many of the segments in the market use a general term when ordering or specifying a particular type of product. Asphalt-Saturated Organic Felt Underlayment ("felt") is most commonly stated as '30 pound felt' or 'Type 30 felt'. These 'terms' may allow for inappropriate or substandard products to be used; further definitions are becoming necessary to follow current industry developments. Ensure the most detailed specifications are used to maintain the integrity of a project and compliance with local building codes.

### The American Society for Testing Materials Standards ("ASTM") for Asphalt-Saturated Organic Felt Definitions:

ASTM Designation 226 (ASTM D 226) is the "Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing"

ASTM Designation 4869 (ASTM D 4869) is the "Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing"

ASTM notes that:

- 1) Type 30 felt is more of a name today than a weight reference.
- 2) The specification in jobs would be ASTM Designation 226 ("ASTM" D 226) or ASTM Designation 4869 ("ASTM" D 4869). Check [www.astm.org](http://www.astm.org) for the most current information.

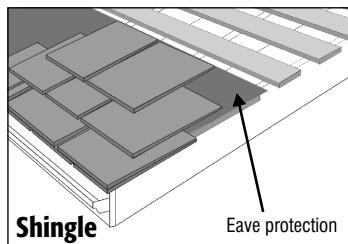
There are differences in the asphalt content and composition of the felt within ASTM Designations. It is important to check with local building code requirements when specifying the ASTM Designation number as some codes require the use of a specific ASTM Designation for roof and sidewall application.

Manufacturers of these products still use a "Type 15" or "Type 30" identifier on the product identification bands but also will state ASTM Designation 226 or ASTM Designation 4869 when the product meets ASTM standards. The CSSB recommends specifiers always state a **No.30 ASTM D 226** or **No.30 ASTM D 4869** felt in addition to the "Type 30" referred to in the CSSB's New Roof Construction Manual and the CSSB's Exterior and Interior Wall Manual.

### Self-Adhesive Eave Protection

Self adhesive eave protection is a rubberized type of asphalt material used at the bottom of the roof near the gutter area. It is in place to prevent ice damming and water intrusion from the eaves.

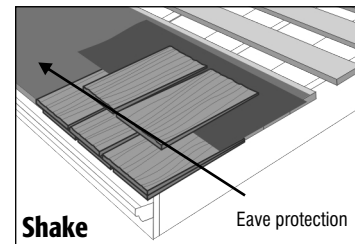
It may be used at the eaves and valleys in geographical areas prone to ice damming, on both cedar shake and cedar shingle roofs (consult local building codes for more details).



Shingle

Eave protection

Underlayment



Shake

Eave protection

Interlaid/Interwoven Felt



### Caution Areas

- There is a trend where some installers are putting rubberized eave protection over the entire roofing deck. Contact the rubberized eave manufacturer for complete installation instructions and information on how to prevent condensation and moisture issues.
- Current CSSB policy is to only apply this rubberized eave protection at the eaves and valleys.
- Interlay shakes with 18" wide felt and ensure to check with local building code for ASTM Designation 226 requirements
- Never interlay shingles with felt (it is already a 3-ply system) UNLESS absolutely required by local building code
- Do not position felt lower than double the exposure of the product. If the felt does extend below this line it is commonly referred to as 'rot felting' since the felt is susceptible to deterioration from the sun's UV rays. Rot felting can also prevent proper drying of shakes and shingles, thus shortening their life.



Type 30 ASTM Felt



Self-adhesive eave protection (do not confuse with Type 30 ASTM felt)

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Cedar Roof Underlayment, Interlayment and Eave Protection

### Frequently Asked Questions:

#### Current Industry Trends

- Vapor permeable banner wrap type products have made inroads in house design and construction in the recent past. Use of this type of product should only be considered if the local building official approves of this variation from the installation methods recommended by the CSSB. Also consider the data at [www.umass.edu/bmatwt/publications](http://www.umass.edu/bmatwt/publications), Housewraps/Felt and Weather Penetration Barriers - author Paul Fiset
- Modern homes are built more air tight, and this means that proper ventilation of the structure is even more crucial. The CSSB recommends venting no less than 1:150 with compensation made for screens over vent apertures. In the case of a balanced system 1 square foot per 300 square feet of floor area may be adequate ventilation. Check with the local building official for more information.

#### Do I have to use a continuous ventilation product on my installation?

Not necessarily. The continuous ventilation product is an option, especially in high humidity areas. Consult the CSSB's **New Roof Construction Manual** for information about roofing application options.

#### Can I use a continuous ventilation product instead of felt?

No. Felt is a must. The continuous ventilation product is an additional option, especially in high humidity areas. Consult the CSSB's **New Roof Construction Manual** for information about roofing application options. Remember: do not interlay shingles with felt unless required by local code.

#### Can I use a continuous ventilation product immediately on top of felt?

No. If you elect to use a continuous ventilation product, it should be installed between the sheathing (deck) and the felt. Consult the CSSB's **New Roof Construction Manual** for information about roofing application options.

#### When I hear "30 pound felt" does it mean the same thing as "Type 30 felt"?

In the construction and roofing trades, it is common for people to use the terms interchangeably. Type 30 felt comes in many varieties. Ensure you also write in the correct ASTM Designation in your detailed specification to guarantee that you are obtaining quality materials.

The information in this bulletin is not intended to supercede local building codes. Check with your local building official for final approval. The CSSB assumes no liability for any application non-conformance.

This bulletin only provides a short overview of this technical topic. For additional details consult:

- 1) CSSB's New Roof Construction Manual &
- 2) CSSB's Exterior and Interior Wall Manual; these are recommended reading materials.

For additional industry information:

Cedar Shake & Shingle Bureau	<a href="http://www.cedarbureau.org">www.cedarbureau.org</a>
American Forest and Paper Association	<a href="http://www.afandpa.org">www.afandpa.org</a>
American Society for Testing and Materials	<a href="http://www.astm.org">www.astm.org</a>
American Wood Council	<a href="http://www.awc.org">www.awc.org</a>
Canadian Wood Council	<a href="http://www.cwc.ca">www.cwc.ca</a>
Federation of Societies for Coatings Technology	<a href="http://www.coatingstech.org">www.coatingstech.org</a>
Forintek Canada	<a href="http://www.forintek.ca">www.forintek.ca</a>
International Staple, Nail & Tool Association	<a href="http://www.isanta.org">www.isanta.org</a>
University of Massachusetts	<a href="http://www.umass.edu/bmatwt/publications">www.umass.edu/bmatwt/publications</a>
USDA Forest Products Laboratory	<a href="http://www.fpl.fs.fed.us">www.fpl.fs.fed.us</a>

*Known as the recognized industry authority since 1915, the Cedar Shake and Shingle Bureau ("CSSB") is a successful, integrated and global trade association, offering a full range of services including technical assistance, building code updates, and weather resistant product details. Contact the CSSB for more information.*

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