

ICE AND WATER BARRIER

Overview: Ice and water shield is a self-adhering waterproofing membrane used in roofing applications. It serves as a protective barrier to prevent water infiltration caused by ice dams and wind-driven rain. This material is crucial in maintaining the integrity of roofs, especially in regions prone to severe weather conditions.

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I. Composition

Ice and water shield typically consists of:

- **Rubberized Asphalt:** Theonent, offering excellent adhesion and flexibility.
- **Polyethylene Film:** Provides a durable, slip-resistant surface that helps in the installation process.
- **Release Liner:** A protective layer that is removed during primary waterproofing comp installation to expose the adhesive surface.

II. Key Features

- **Self-Adhesive:** Easily adheres to roof decks, creating a watertight seal without the need for additional fasteners.
- **Flexibility:** Conforms to roof surfaces and accommodates slight movements, reducing the risk of cracks and leaks.
- **Durability:** Resistant to weather extremes, UV rays, and physical damage.
- **Ease of Installation:** The peel-and-stick application simplifies the process, saving time and labor.

III. Areas Where Ice and Water Shield is Applied

- **Eaves and Rakes:** Prevents water damage from ice dams along roof edges.
- **Valleys:** Protects against water infiltration in roof valleys where two slopes meet.
- **Chimneys and Skylights:** Ensures a watertight seal around roof penetrations.
- **Dormers and Roof-to-Wall Transitions:** Provides additional protection in areas prone to water intrusion.



IV. Installation Guidelines

- **Surface Preparation:** Ensure the roof deck is clean, dry, and free of debris.
- **Temperature Considerations:** Ideal installation temperatures range from 40°F to 90°F. Special considerations or primers may be needed for colder conditions.

V. Application:

- Remove the release liner and position the membrane.
- Press firmly to ensure full adhesion.
- Overlap edges by at least 3 inches for a continuous seal.
- **Sealing Edges:** Use roofing sealant to secure edges and overlaps if necessary.
- **Final Inspection:** Check for proper adhesion and coverage, ensuring there are no gaps or wrinkles.

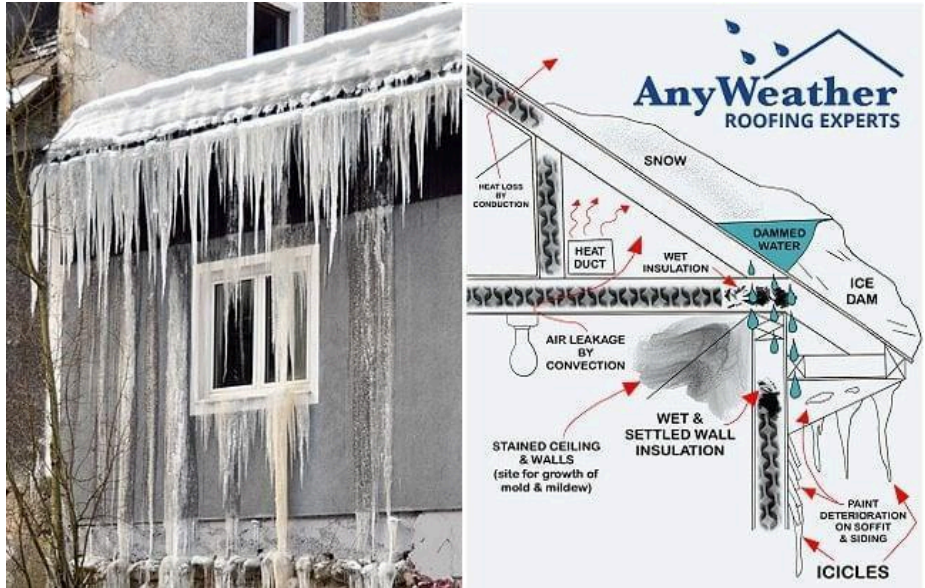
VI. Maintenance and Longevity

- **Inspection:** Regularly inspect the roof for any signs of damage or wear.
- **Repairs:** Promptly address any issues to maintain the integrity of the waterproofing barrier.
- **Longevity:** Properly installed ice and water shield can last for decades, providing long-term protection.
- **Enhanced Protection:** Superior defense against ice dams and wind-driven rain.

- **Cost-Effective:** Reduces the risk of expensive water damage repairs.
- **Versatility:** Suitable for various roofing materials and configurations.

VII. Code Requirements:

- In northern U.S. states and the northern half of Illinois, ice and water barriers are a building code requirement.
- The code typically requires coverage extending 24 inches from the wall on most roofs or 36 inches if the slope is steep (over 8/12).
- The barrier must extend from the eaves edge to at least 24 inches inside the interior wall of the building.



VIII. Understanding Measurements:

- Ice and water barriers are thicker than standard underlayment and are calculated differently.
- For eaves, the requirement is usually 6 feet times the linear feet, while for valleys, it is 3 feet times the linear feet.
- Overhang: Longer overhangs require more barrier material.
- Pitch: Steeper roofs require more barriers to cover the same horizontal distance.
- Example: A roof with a 12-inch overhang, 6-inch wall thickness, and steep pitch might require more than one roll of 36-inch barrier.



IX. Calculation and Installation:

- Ensure correct measurements to meet code requirements and avoid leaks.
- Ice and water barriers are sold in 3-foot rolls.
- Calculate needs by considering overhang length, wall thickness, **24 inches inside**, and pitch. Please see sample of a roof with an overhang:



<https://www.inchcalculator.com/ice-water-shield-calculator/>
<https://www.inchcalculator.com/linear-feet-to-square-feet-calculator/>

In most cases, insurance estimates only account for **3 feet or 1 row** of Ice & Water Barrier coverage. However, our calculation reflects the necessary coverage based on actual installation requirements. Additionally, some insurance companies don't include valleys in their calculations.

CSP Sample Calculation:

- Total Eave Length $\times$ 6 feet
- Total Valley Length $\times$ 6 feet
- Eaves: $315 \text{ ft} \times 6 \text{ ft} = 1,890 \text{ sq. ft.}$
- Valleys: $173 \text{ ft} \times 4.5 \text{ ft} = 778.50 \text{ sq. ft.}$
- **Total Coverage: 2,668.50 sq. ft.**

Insurance Sample Calculation:

- Total Eave Length $\times$ 3 feet
- Total Valley Length $\times$ 3 feet
- Eaves: $315 \text{ ft} \times 3 \text{ ft} = 945 \text{ sq. ft.}$
- Valleys: $173 \text{ ft} \times 3 \text{ ft} = 519 \text{ sq. ft.}$
- **Total Coverage: 1,464 sq. ft.**

X. Handling Insurance and Adjusters:

- Verify insurance coverage and code requirements.
- Insurance companies might use different measurements, leading to discrepancies.
- Use precise calculations and documented evidence to negotiate with adjusters.
- For steep roofs and large overhangs, explain the necessity for multiple rolls of barrier.

XI. Common Issues:

- Adjusters may undercalculate or make errors in their estimates.
- Use measurement reports and tools like Google's linear feet to square feet calculators to verify.
- Compare different measurement reports (e.g., Hover vs. Eagle View) to resolve discrepancies.

XII. Practical Tips:

- Check the building code for your specific area and use the appropriate IRC code.
- Use online calculators to simplify the calculation process.
- Document calculations and use screenshots or links to calculators to support your claims.
- Explain to the adjuster using documented evidence if their calculations don't match the code requirements.

XIII. Special Considerations:

- Ice and water barriers must be installed on eaves, valleys, and sometimes around skylights and chimneys.
- Ensure the barrier is installed correctly to prevent water accumulation and damage.
- For porches and other roof extensions, ensure the barrier covers the entire required area to meet code.

XIV. NOTES:

- Understanding these requirements and calculations is crucial for proper installation and negotiation.
- Use available resources and double-check estimates to ensure accuracy.
- While not all adjusters will agree, clear and thorough explanations can help secure the necessary coverage for proper ice and water barrier installation.

XV. Usual Push backs from Adjusters:

1. It is not required by code.

*What do you specifically need to get this approved?

- We need code docs from the city showing that IWS is in fact required. Look it up in google or look it up on the village/city's website. Under permit fee application, it will include what is required.
- If you cannot find the building code for a certain city or village, please reach out to Vicki for the oneclickcode.

2. Only 1 row of IWS is required/INS will only allow for the minimum requirement.

- Check if there is an overhang and calculate. Prepare your calculation and your notes.
- We will ask the adjuster how they calculated their IWS.
- Ask the adjuster: "Can you walk me through how this was calculated?"

3. Wrong calculation.

- In preparation, do your own calculation before you call.
- We will ask the adjuster how they calculated their IWS.
- Ask the adjuster: "Can you walk me through how this was calculated?"

4. No code coverage.

- Ask the adjuster: "How can we have the IWS reconsidered?" to determine if submitting photos can help prove that the IWS was pre-existing.
- Check if there are any pre-existing photos of IWS during Production. Please see sample below:



XVI. Conclusion

Ice and water shield is an essential component in modern roofing systems, offering robust protection against the elements. Its ease of installation, durability, and effectiveness make it a preferred choice for both residential and commercial roofing projects. Proper application and regular maintenance ensure that this waterproofing barrier performs optimally, safeguarding the roof structure for years to come.