



WIP®: Water and Ice Protection Roofing Underlayments Field Guide



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Water and Ice Protection



Water and Ice Protection (WIP) is a line of self-adhering roofing underlayments used on critical roof areas such as eaves, rakes, ridges, valleys, dormers and skylights to protect roofing structures and interior spaces from water penetration caused by wind-driven rain and ice dams. WIP may also be used as covering for the entire roof to prevent moisture or water entry.

WIP is manufactured and backed by Carlisle, a leader in the roofing industry for more than 50 years.

We Have a WIP for That



Product	Composition
WIP 100	Black, granular, flexible, fiberglass-reinforced rubberized asphalt membrane
WIP 250	Fiberglass-reinforced, rubberized asphalt membrane
WIP 300HT	High-tensile strength, rubberized asphalt membrane available with black or white film
WIP 400	Black membrane composed of engineered polyolefin composite film laminated to rubberized asphalt
WIP 401LT	Black membrane composed of engineered polyolefin composite film laminated to rubberized asphalt
WIP 403HR	High-performance, rubberized asphalt membrane



Ideal Use	Exposure
Ideal for use on critical roof areas or as entire roof covering; economical, standard protection	30 days
Ideal for use under metal and mechanically fastened tile roofs; high-temperature applications up to 250°F	90 days
High-temperature applications up to 250°F; ideal for use under metal roofs and synthetic, clay and concrete tiles and asphalt shingles	White – 120 days Black – 60 days
Specification-grade underlayment, superior protection against damage caused by wind-driven rain and ice dams	60 days
Ideal for low-temperature applications when temperature is between 30°F and 70°F	60 days
Premium, heat-resistant membrane, ideal in hot climates up to 250°F and higher elevation areas. Ideal for use under metal roofs and synthetic, clay and concrete tiles and asphalt shingles	60 days

Why Choose WIP?

Split-release Film

All WIP products feature a split-release film for quick-and-easy installation.

Moisture and Air Barrier

Membrane protects the roof structure from water seepage caused by ice dams and wind-driven rains.

Meets Standards and Codes

All WIP Products meet UL and ASTM D1970 standards. (Refer to technical sheets for FL and ICC-ES approvals.)

Self Sealing

Membranes seal around roofing nails, staples and screws.

Watertight

WIP 300 and 400 series feature an exposed rubberized asphalt bead along the membrane edge to help ensure water-tightness of the lap seams.

Self Adhering

Membranes bond directly to most roof substrates without the need for additional adhesives. Some applications require the use of primer—refer to pages 7–8 for specific requirements.





Permanent Protection and Low Lifecycle Cost

Will not crack, dry out or rot and provides long-term waterproofing performance.

Aesthetically Pleasing

WIP is a concealed waterproofing system that will not detract from the architectural aesthetics of the primary roofing system.

Backed by Carlisle, a leader in roofing innovation for half a century.

All WIP products are backed by Carlisle's industry-leading limited warranty.

Installation Instructions

General Information

WIP roofing underlayments are applied when the roof deck is dry and the air, membrane and substrate temperatures are 40°F (4.4°C) or higher, except for WIP 250, which should be installed when temperatures are at or above 50°F (10°C) and WIP 401LT, which can be installed in temperatures down to 25°F (-3.89°C). At temperatures below 40°F, (or 50°F for WIP 250) nailing or priming should be used to temporarily hold the membrane in place while adhesion develops.

WIP roofing underlayment is designed to be covered with the primary roofing system and should not be exposed to sunlight for more than the recommended number of days (refer to pages 3–4 for exposure times).

Substrate must be free of any moisture as it may inhibit adhesion. Prepare the roof deck by removing all loose objects, dirt, dust or debris. For re-roofing applications, remove all old materials from the roof deck in the area to be covered with WIP roofing underlayment. Replace water-damaged sheathing and sweep roof deck thoroughly.

Priming: Priming is not required on clean, dry wood, metal or most polyisocyanurate surfaces (polyiso paper facer does require priming). Masonry and exterior gypsum boards (such as DensDeck®) should be primed using an appropriate primer or adhesive. Some rigid insulation boards with porous or dusty surfaces may require priming to promote initial adhesion. Priming is required on all substrates when air, membrane or substrate temperatures are below 40°F (4.4°C), or 50°F (10°C) for WIP 250. Adhesives such as CCW-702, CCW-702WB, CAV-GRIP™ and CCW-AWP are approved for use with WIP products. Refer to your local building codes to determine acceptable product for use in your region.

Selection of roof deck or insulation substrate and/or use of a primer or adhesive are the responsibility of the architect, specifier or roofing contractor to determine based on the roof assembly and environmental conditions.

Valleys, Hips & Ridges

Cut WIP roofing underlayment into manageable lengths. Align over the center of the valley, hip or ridge. Remove release film. Press the middle of the membrane first before working toward the edges. For open valleys, cover WIP roofing underlayment with metal valley liners.

Eaves & Rakes

Cut WIP roofing underlayment into 10–15' pieces. Remove 2–3' of release film and align the edge of the membrane, sticky side down, so it overhangs the drip edge by $\frac{3}{8}$ " (10 mm). Continue to remove release film and press as you move across the roof. Use a hand roller and/or hand pressure to press into place. For split-release film, peel half the liner off the cut length and position membrane in place. Apply firm, even pressure from the center to the outer edge. Remove the remaining half of the film and apply pressure to secure the membrane. Overlap end laps a minimum of 6". WIP roofing underlayment should reach a point 2' past the inside of the interior wall line. Local codes may require additional courses. If additional courses are required, the top lap must be at least $3\frac{1}{2}$ ".

Drip Edges: At the rake edge, apply WIP roofing underlayment first and place drip edge on top. At the eave, apply drip edge first and place WIP roofing underlayment on top of the drip edge so that it overhangs drip edge $\frac{3}{8}$ " (10 mm).

For standard installation details, follow the WIP detail drawings found on pages 11–23 of this guide. For non-standard installation instructions, contact your local Carlisle WIP representative.

Metal Roof Underlayment

Under water-shedding metal roof systems or low-slope metal roofs with a minimum $\frac{1}{2}$ " slope, start at the low point and apply WIP roofing underlayment over the full surface of the roof deck. Review the metal roofing manufacturer's instructions for limitations and precautions. Beginning at the eaves, apply product from the low point to the high point of the roof, running the roll horizontally.

Important Considerations



- Do not expose WIP underlayments to sunlight for longer than the recommended exposure times listed on page 4 of this guide and on the technical data sheets.
- WIP underlayments should not be folded over the roof edge unless protected by a gutter or other flashing materials.
- The primary roof system must be ventilated to prevent excessive moisture build-up in the interior structure.
- Use caution during the installation of the membrane as it may become slippery when wet or covered with frost.
- WIP underlayments are not to be used in contact with flexible PVC material.
- Ensure you are using the proper WIP underlayment for the roofing material by referencing the usage chart on pages 3–4 of this guide and referring to the technical data sheet for each WIP product. For metal roof installations, be sure to follow the metal manufacturer's recommended installation guidelines for underlayments.

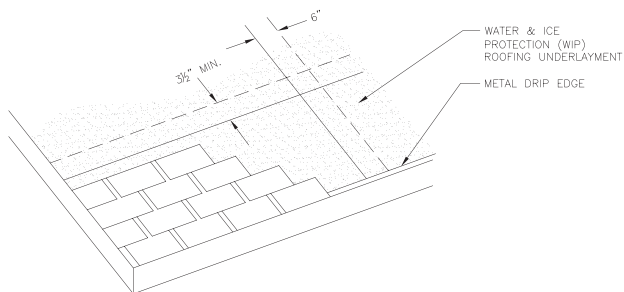


- WIP roofing underlayment rolls should be stored under cover and in areas where the temperature is between 40° and 100°F (4.4° and 38°C). **Do not double-stack pallets.**
- WIP Products will display optimal performance when stored under recommended conditions and used within one year of date of manufacture. Product installed after one year of date of manufacture is not covered under defect warranty.
- WIP 100, 400 and 401LT are not approved for use under metal roofs.
- WIP 100 installed at 100% coverage will create an air and vapor barrier on the roof deck.
- WIP 250, 300HT and 403HR are not approved for use in foam set tile applications.

* Refer to WIP technical data sheets for full details required for usage and installation.

Installation Details

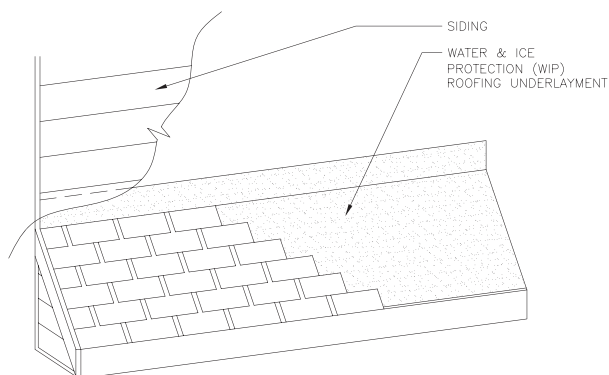
Rakes and Eaves



NOTES:

1. EXTEND MEMBRANE TO EXCEED ANTICIPATED ICE DAM HEIGHT.
2. CAREFULLY POSITION MEMBRANE AT ROOF PERIMETER WHEN INSTALLING METAL DRIP EDGE.
3. INSTALL WIP IN SHINGLE FASHION EDGE SPLICE IS $3\frac{1}{2}"$ MIN. END SPLICE 6" MIN.

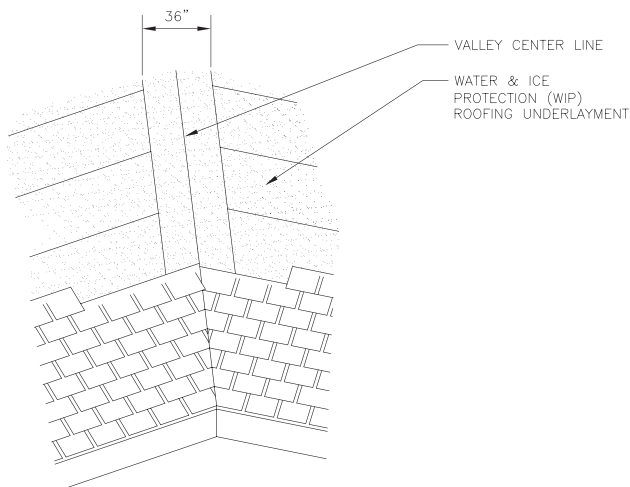
Roof to Wall Transitions



NOTES:

1. EXTEND MEMBRANE TO EXCEED ANTICIPATED ICE DAM HEIGHT.
2. INSTALL WIP IN TRANSITION AREA FIRST, THEN COVER WITH METAL FLASHING AND SHINGLES.
3. WIP IS NOT INTENDED FOR EXPOSED FLASHING APPLICATIONS.
4. INSTALL ROOFING SHINGLES PER MANUFACTURERS INSTRUCTIONS

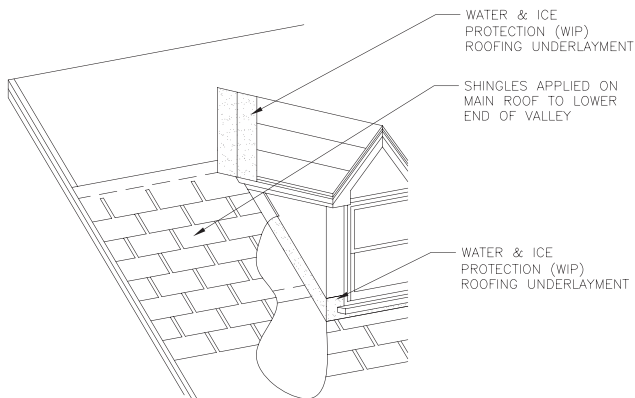
Valleys



NOTES:

1. CENTER MEMBRANE OVER VALLEYS AND RIDGES STARTING AT THE LOW POINT FOR LAPS TO SHED WATER.
2. AVOID FASTENERS IN THE VALLEY.

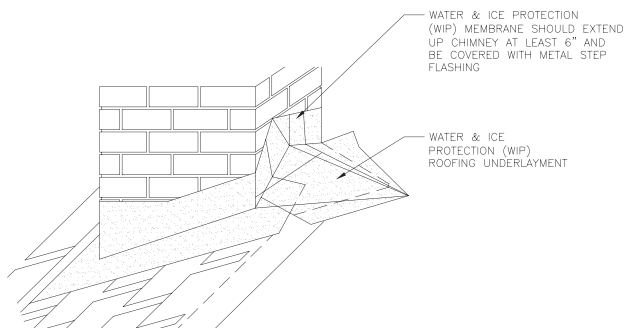
Dormers



NOTES:

1. EXTEND MEMBRANE TO EXCEED ANTICIPATED ICE DAM HEIGHT.
2. COVER MEMBRANE WITH METAL STEP FLASHING OR SHINGLES.

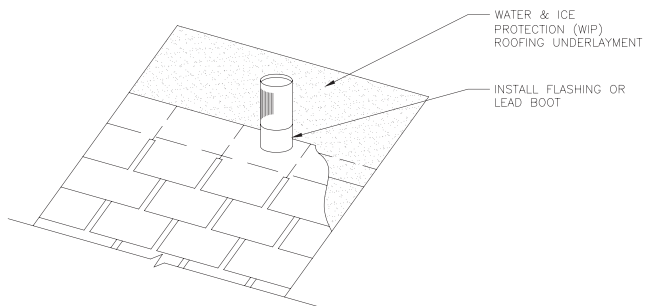
Chimney Flashings



NOTES:

1. COVER CRICKET WITH WIP MEMBRANE AND EXTEND ONTO ROOF DECK A MIN. OF 12"

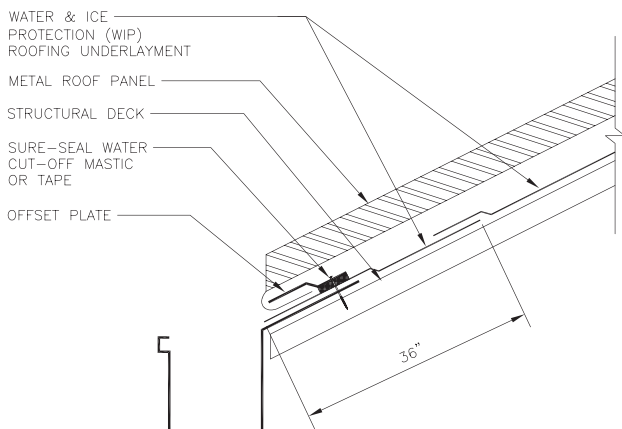
Pipe Penetrations



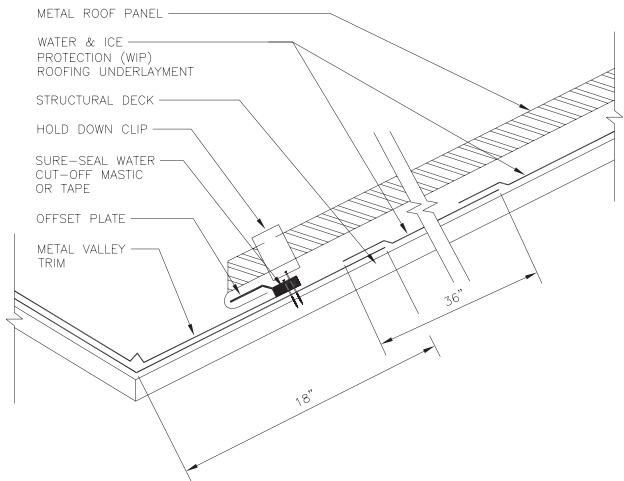
NOTES:

1. CUT THE WIP MEMBRANE TO FIT SECURELY AROUND PENETRATION.
2. INSTALL FLASHING OR LEAD BOOT OVER WIP DURING LAYING OF SHINGLES.

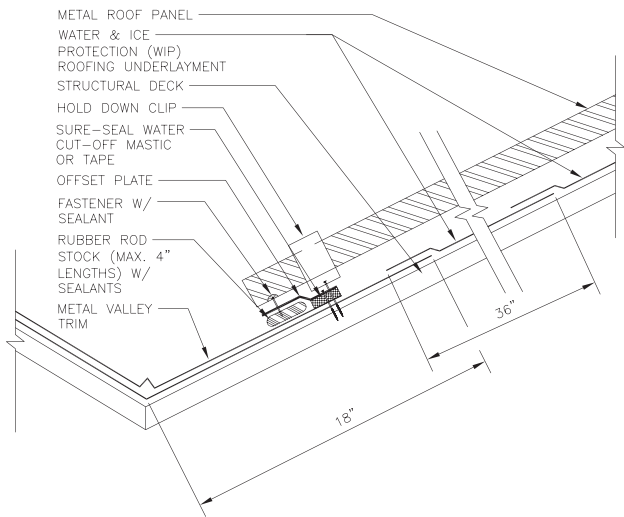
Metal Eaves



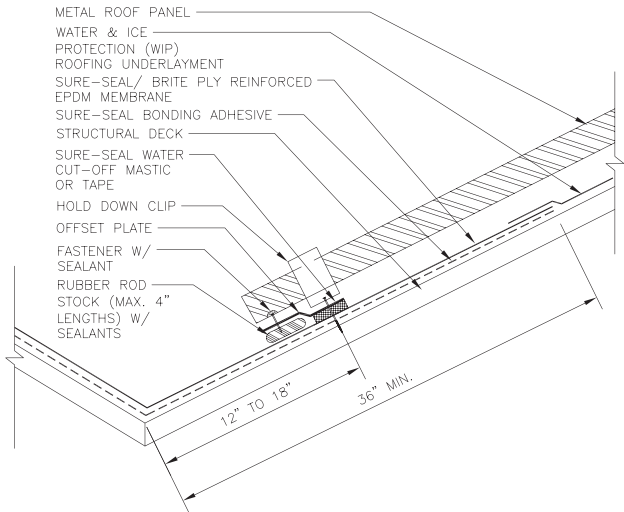
Floating Valleys



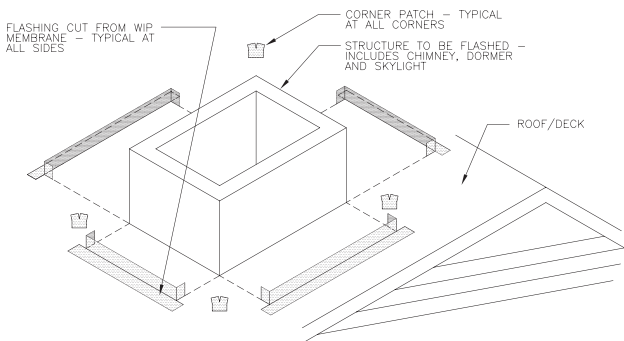
Covered Fixed Valleys



Exposed Fixed Valleys



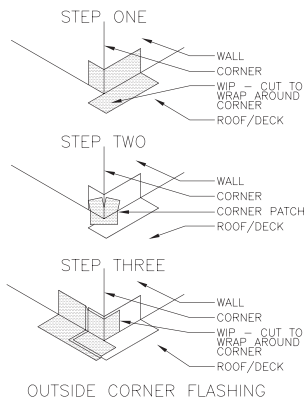
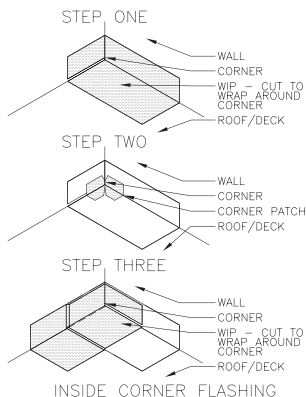
Inside/Outside Corners



NOTES:

1. THE SUBSTRATE HAS TO BE CLEAN AND DRY.
2. RELEASE PAPER IS REMOVED AT TIME OF INSTALLATION.
3. ALL MASONRY OR CONCRETE HAS TO BE PRIMED.
4. WORK FROM BOTTOM OF SLOPE UP THE ROOF TO FORM WATER SHEDDING LAPS.
5. MODIFY RELIEF CUTS IN PATCH AS REQUIRED.
6. COVER ALL EXPOSED FLASHING WITH METAL FLASHING, SIDING OR SHINGLES/ ROOF COVERING.

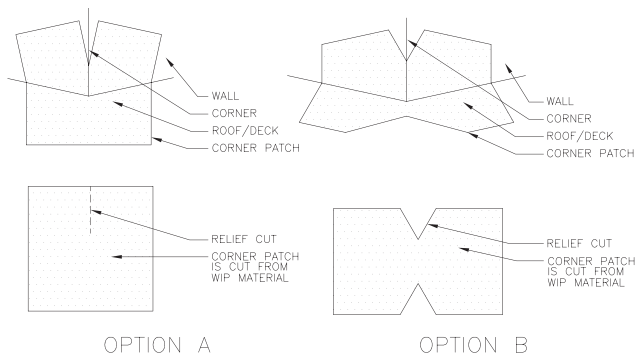
Inside/Outside Corners



NOTES:

1. THE SUBSTRATE HAS TO BE CLEAN AND DRY.
2. RELEASE PAPER IS REMOVED AT TIME OF INSTALLATION.
3. ALL MASONRY OR CONCRETE HAS TO BE PRIMED.
4. WORK FROM BOTTOM OF SLOPE UP THE ROOF TO FORM WATER SHEDDING LAPS.
5. MODIFY RELIEF CUTS IN PATCH AS REQUIRED.

Corner Patches



NOTES:

1. THE SUBSTRATE HAS TO BE CLEAN AND DRY.
2. RELEASE PAPER IS REMOVED AT TIME OF INSTALLATION.
3. TYPICAL PATCH SIZE IS 6"x6".
4. SEVERE WEATHER CLIMATE TYPICAL PATCH SIZE IS 12"x12".

Technical Support

In an effort to provide prompt and efficient technical support for our WIP products, please use the following contact information. Submitting requests via email is recommended.

Technical Service Email:
technicalservices@ccw.carlisle.com

Technical Service Line:
888-229-2199

Letter and Detail Request

Timeframe:

Warranties – 1 to 2 weeks

Letters – 24 to 72 hours

Details – 1 to 2 weeks depending on quantity

Required information for request:

- Completed forms
- Project name and address along with applicator name, contact name and address and support info: details, specs, data sheets
- Architectural/engineer detail or hand sketch along with digital pictures of condition

Documentation

Technical data sheets, MSDS, manufacturer's letters, testing reports and all supporting literature for WIP products is available online at www.carlislewip.com.

About Carlisle WIP Products

As a division of Carlisle Construction Materials Incorporated, Carlisle WIP Products manufactures premium construction products for steep-slope and low-slope residential and commercial applications.



Carlisle WIP Products

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