

**CARLISLE**

# WIP 403HR

**WATER & ICE PROTECTION****HEAT RESISTANT**

## Self-Adhering Roofing Underlayment

### PRODUCT DESCRIPTION

Water and Ice Protection (WIP®) 403HR (Heat Resistant) Roofing Underlayment is a 40-mil self-adhering sheet membrane designed for use in hot climate areas (up to 250°F) beneath metal roofing, synthetic tiles and asphalt shingles. The high-performance adhesive resists softening and flow at the high in-service temperatures found in these areas.

WIP 403HR is comprised of a strong, skid-resistant polyethylene film laminated to a thick layer of butyl-modified adhesive. It is used as an underlayment on critical roof areas or for full coverage protection against water penetration caused by wind-driven rain or ice dams. A siliconized release sheet is used to prevent the material from sticking in the roll and is easily stripped away for installation.

### INSTALLATION

#### General Information:

Cut membrane into manageable lengths for placement on roof substrate. Expose a portion of adhesive membrane and carefully position at the roof perimeter. Remove the remaining silicone release sheet and adhere underlayment to the substrate. Brooming the membrane in place will maximize adhesion. Center the membrane over valleys and ridges starting at the low point and working upward. End laps are overlapped 6" and side laps 3.5".

WIP roofing underlayments are applied when the roof deck is dry and the substrate temperature is 40°F (4.4°C) or higher. At temperatures below 40°F, nailing or priming should be used to temporarily hold the membrane in place while adhesion develops. WIP 403HR is designed to be covered with the primary roofing system and should not be exposed to sunlight for more than 180 days.

*Moisture:* Substrate must be free of any moisture. If moisture is present, it may inhibit adhesion.

*New Construction:* Prepare the roof deck by removing all loose objects, dirt, dust or debris.

*Re-roofing:* Remove all old materials from the roof deck in the area to be covered with WIP 403HR roofing underlayment. Replace water-damaged sheathing and sweep roof deck thoroughly.

*Priming:* Not required for attachment to wood surfaces. All concrete surfaces and polyisocyanurate insulation should be primed using the appropriate primer or adhesive. Adhesives such as CCW-702 or CAV-GRIP™ are appropriate and required when temperatures are below 40°F.

#### Valleys, Hips & Ridges:

Cut WIP 403HR 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 403HR roofing underlayment with metal valley liners.

### PRODUCT SPECIFICATIONS

#### PHYSICAL PROPERTIES

Surface	Blue Film	
Membrane	Rubberized Asphalt	
<b>PRODUCT CHARACTERISTIC</b>	<b>UNITS</b>	<b>RESULTS</b>
Roll Length	feet	75
Roll Weight	lbs.	62
Coverage Per Roll	sq./ft.	225
Roll Width	inches	36
<b>TYPICAL PERFORMANCE PROPERTIES</b>	<b>TEST METHOD</b>	<b>RESULTS</b>
Thickness	ASTM D1970	40 mils
Low Temperature Flexibility	ASTM D1970	-40°F
Adhesion to Plywood at 75°F	ASTM D1970	35 lbs./ft.
Lap Seam Adhesion at 75°F	ASTM D1970	21 lbs./ft.
Sealability Around Nail	ASTM D1970	Pass
Slip Resistance	ASTM D1970	Pass
Thermal Stability	ASTM D1970	Pass
Moisture Vapor Permeance	ASTM D1970	0.02 perms
Water Absorption	ASTM D1970	0.5%
Tensile Strength Machine Direction	ASTM D412	1200 psi
Tensile Strength Transverse Direction	ASTM D412	1390 psi
Elongation at Break Machine Direction	ASTM D412	490%
Elongation at Break Transverse Direction	ASTM D412	170%
<b>PACKAGING INFORMATION</b>		
Boxes (rolls) per pallet		25

#### 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 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. Overlap end laps a minimum of 6". WIP roofing underlayment should reach a point 2' inside the interior wall line. Local codes may require additional courses. If additional courses are required, the top lap must be at least 3.5".

*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 3/8" (10 mm).

For standard installation details, follow the WIP detail drawings. For non-standard installation instructions, contact your local Carlisle Residential representative.

#### Metal Roof Underlayment:

Under water-shedding metal roof systems or low-slope metal roofs with a minimum 1/2" slope, start at the low point and apply WIP 403HR 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.

## ADVANTAGES

- High Temperature Formulation: WIP 403HR will resist temperatures up to 250°F without degradation of the adhesive.
- Moisture and Air Barrier: WIP 403HR protects the roof structure from water seepage caused by ice dams and wind-driven rains.
- Self Sealing: WIP 403HR membranes seal around roofing nails, staples and screws.
- Self Adhering: WIP 403HR membranes bond directly to the roof substrate for fast and easy installation without the need for additional adhesives.
- Permanent Protection and Low Lifecycle Cost: WIP 403HR will not crack, dry out or rot and provides long-term waterproofing performance.
- Aesthetically Pleasing: WIP 403HR is a concealed waterproofing system that will not detract from the architectural aesthetics of the primary roofing system.
- Watertight Seams: WIP 403HR features an exposed rubberized asphalt bead along the edges that helps ensure the water tightness of the lap seams.

## LIMITATIONS

- Roof deck surface must be clean, dry and free of debris.
- Surface must be free of sharp protrusions that could cut through the membrane.
- WIP 403HR Roofing Underlayment must be covered with finished roofing material within 180 days. This membrane is not intended for permanent exposure. Consult manufacturer if exposure will exceed 180 days.
- Consult Carlisle Representative for extreme high- or low-temperature applications. Applications below 40°F may require priming and nailing of the membrane.
- Review the metal roofing manufacturer's instructions or the NRCA Manual for limitations, recommendations and precautions.
- Not to be used in contact with flexible PVC material.

## APPLICABLE STANDARDS

Carlisle Residential 403HR Roofing Underlayment meets or exceeds the requirements of:

- 2009 International Building Code™
- ICC-ES ESR #2206
- US-UL Classified
- Meets ASTM D1970
- State of Florida Approved Product FSA #FL6785

## STORAGE

WIP 403HR roofing underlayment rolls should be stored flat, under cover and in areas where the temperature is between 40° and 100°F (4.4° and 38°C). Do not double-stack pallets.

## LIMITED WARRANTY

CARLISLE COATINGS AND WATERPROOFING INCORPORATED (CARLISLE) warrants this product to be free of defects in workmanship and materials only at the time of shipment from our factory. If any CARLISLE materials prove to contain manufacturing defects that substantially affect their performance, CARLISLE will, at its option, replace the material or refund the purchase price.

This limited warranty is the only warranty extended by CARLISLE with respect to its materials. There are no other warranties, including the implied warranties of merchantability and fitness for a particular purpose. CARLISLE specifically disclaims liability for any incidental, consequential or other damages, including, but not limited to, loss of profits or damages to a structure or its contents, arising under any theory of law whatsoever.

The dollar value of CARLISLE'S liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the CARLISLE material in question.

