

WIP® Products Used as Roofing Underlayment Air and Vapor Barrier

Carlisle WIP Products are designed to be installed as an underlayment in various roof assemblies. In applications where full coverage underlayment is installed, it is critical for the roof to be properly vented. Proper ventilation may prevent unnecessary condensation accumulation within the assembly or attic space, which is often mistaken for a leaky roof. A non-vented roof can trap moisture within the roofing assembly, which can lead to failure of structural building components and expensive repair costs.

The International Residential Code (IRC) provides guidelines for a properly vented roof. Carlisle recommends consulting with a qualified design professional prior to application of Carlisle WIP Products to ensure proper application.

International Residential Code (IRC), Section R806.1, requires an attic to be vented and provides minimum guidelines such as 1 ft² of net free ventilation area per 150 ft² of attic space. Section R806.5 provides guidelines for unvented roof assemblies; however, Carlisle WIP Products are not currently designed to be installed as full coverage roofing underlayment over an unvented roof assembly.

Any combination of ridge, soffit, roof deck, or gable vents can adequately vent the roof. Best practice includes an equal number of ridge and soffit vents. Generally, air flows from the soffit vents upward toward the ridge or roof deck vents. Gable vents are not as efficient as other means of roof venting due to disrupted airflow patterns.

Cathedral ceilings where insulation is placed between the rafters should also have means of venting between the underside of the roof sheathing and the insulation. Venting should include air passage through both inlet and outlet vents to keep moisture out of the roof assembly. Carlisle offers the Hunter Panels Cool-Vent product as one solution for such assemblies. Roof baffles are also effective in properly venting the roof, especially in roofs where spray polyurethane foam (SPF) is applied directly on the underside of the roof deck.

Climate regions are also very important for adequate roof ventilation. Cool climates require roof venting to prevent ice damming. Warm, humid climates require roof venting to keep condensation out of the roofing assembly. Proper roof venting also helps to keep the roof slightly cooler in regions with warm, humid climates.

The use of full coverage Carlisle WIP Products can affect the warrantability of the membrane. Contact Technical Services for more detail and product limitations ccwtech@carlisleccw.com or 888-229-2199.