Issue Description:

Self-adhered underlayments provide a waterproof layer in roof systems and seal around fastener penetrations from mechanically fastened underlayment. When installed correctly, they are impermeable to liquid water and water vapor.

When Self-Adhered underlayment is installed over the entire roof deck, it prevents any moisture in the deck from drying to the outside. If the attic below is vented, any moisture in the system can dry to the air inside, which exits through exhaust vents at the ridge.

However, when the entire roof deck is covered with self-adhered underlayment and there are no vents to provide continuous air flow under the deck, water vapor cannot exit the system. Even where no leaks are present, these conditions can cause water vapor in the attic to condense into liquid water. Without ventilation, this moisture is trapped in the attic and may cause wood rot, mold, mildew, and swelling. The swelling may cause buckling under the shingles that is visible on the exterior of the roof. These effects of water intrusion from condensation are commonly mistaken for roof leaks.

Recommendations:

The attic must have adequate ventilation as soon as underlayment is installed, even if the roof covering material is not installed right away. It is important to follow the installation instructions carefully. This affects not only the roof performance but the roof aesthetics.

Consult local building codes for ventilation requirements. Damage caused by improper or inadequate roof ventilation or roof drainage, unvented attics or enclosed roof rafter assemblies is not covered under Warranty. Owen Corning recommends a balanced approach to ventilation, with adequate amounts of both intake and exhaust. For more details, see technical bulletin number TB-10023711.