



technical bulletin

Asphalt Roofing Manufacturers Association

750 National Press Building • 529 14th Street, NW
Washington, DC 20045
Tel: (202) 591 2450 • Fax: (202) 223-9741
www.asphaltroofing.org

Cold Weather Recommendations for Asphalt Roofing Shingles

Asphalt roof shingles have been used successfully in North America and European cold climates for over ninety years. Improved application efficiency, and more importantly, enhanced long-term shingle performance can be achieved by following the cold weather application recommendations outlined below.

- 1 One must always be careful when working on pitched, sloped roofs. In winter applications, there may be ice or frost built up on the wood deck surface, making work even more hazardous. It is advisable to wait until the roof surface is free of ice and frost for safer roof application.
- 2 Often, apparent roof leakage is actually due to condensation of moist home air drifting up into an improperly ventilated attic. To prevent this, ensure that adequate ventilation is provided.¹
- 3 In regions susceptible to freezing winter temperatures, special eave protection must be used to avoid damage from water backup from ice dams at the eave of the roof.² Although smooth surface roll roofing or asphalt saturated felt may be applied under the shingles in warmer weather to prevent ice dams in winter, these products must be warmed to allow time to relax, removing wrinkles or buckles which, if left, will show up later through the finished roofing material. The use of the more flexible polymer modified self-adhering eave and flashing membrane is recommended for application in cold weather. These membranes are also suitable for protecting problem areas such as valleys, skylights, vents and plumbing pipes.
- 4 As with most materials, asphalt shingles tend to become less flexible in cold weather (<40° F). Note that due to the cold, shingle bundles will tend to keep the shape of the surface where they are stacked. Use precaution when handling bundles of shingles and individual shingles in cold weather as they may crack, or in severe cases, break apart. Also, when nailing, make sure the shingles are flat, as the nail may break through the shingle surface. Never bend, throw, or drop bundles of shingles in cold weather. For best results, if possible, store shingles indoors prior to application.
- 5 Most asphalt shingles are manufactured with a thermally activated asphaltic sealant, which bonds the shingles together once applied to the roof and exposed to a few weeks of sufficient heat from sunlight. In order to ensure wind protection until warmer weather occurs, during winter, asphalt shingles can be hard sealed with a asphaltic roofing cement approved by the shingle manufacturer to provide additional protection from wind blow-off. Normally, every tab is sealed down with one or two 1" (25 mm) diameter spots of asphalt roofing cement. For laminated shingles, at least three spots of sealant are used. The top six courses of the roof and all rake courses are especially susceptible to wind blow-off if they are not sealed.
- 6 Woven and closed cut valleys require shingles to be bent, which may result in shingle damage in cold weather. Consideration should be given to open metal valleys.

Note: This document was prepared by the Asphalt Roofing Manufacturers Association and is disseminated for informational purposes only. Nothing contained herein is intended to revoke or change the requirements or specifications of the individual roofing material manufacturers or local, state and federal building officials that have jurisdiction in your area. Any question, or inquiry, as to the requirements or specifications of a manufacturer, should be directed to the roofing manufacturer concerned. THE USER IS RESPONSIBLE FOR ASSURING COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

Nothing contained herein shall be interpreted as a warranty by ARMA, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose or non-infringement. IN NO EVENT SHALL ARMA BE LIABLE FOR ANY DAMAGES WHATSOEVER, including special, indirect, consequential or incidental damages or damages for loss of profits, revenue, use or data, whether claimed in contract, tort or otherwise. Where exclusion of implied warranties is not allowed, ARMA's liability shall be limited to the minimum scope and period permitted by law.

-
- ⑦ Similarly, when finishing the top of the roof, the ridge cap shingles are bent over the intersecting roof planes. In order to ensure that the shingles do not crack during application over the ridge caps (note that thicker, heavier shingles are more susceptible to this cracking), it is suggested to leave one or two bundles of shingles in a warm area from which the ridge cap tabs may be cut.
 - ⑧ When re-roofing over an existing roof in cold weather, one must take extra care to ensure that the roof surface is smooth and flat. If shingles are affixed to an uneven surface in cold weather, that uneven appearance may be “locked in.” Even with the return to warmer weather, the shingles may not be able to completely relax to a smooth looking finished roof.
 - ⑨ If roof maintenance or inspection is required in cold weather, care must be taken when walking on shingles. Shingles applied to an uneven surface, or that are slightly curved or buckled, are very susceptible to breakage underfoot in frigid weather. For some sealants, the bond between courses becomes less flexible in cold weather and roof traffic may break the sealant bond. The shingles may then become susceptible to wind uplift or blow-off, if high winds occur prior to the sealant resealing in warm weather.
 - ⑩ Certain North American regions receive very high snowfall amounts, requiring snow and ice removal from the roof. Extreme caution must be taken during snow removal from the roof so that the shingles are not damaged by shovels, scrapers, or foot traffic. Damage to the shingles that may result from this snow removal is not covered under shingle manufacturers’ limited warranties.

¹ For more information on this topic, consult the ARMA Technical Bulletin, *Ventilation and Moisture Control for Residential Roofing*.

² For more information on this topic, consult the ARMA Technical Bulletin, *Preventing Damage from Ice Dams*.
