



technical bulletin

**Asphalt Roofing
Manufacturers Association**

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Nail Application of Asphalt Shingles for New and Re-cover Roofing

The Asphalt Roofing Manufacturers Association (ARMA) recommends that properly driven and attached roofing nails be utilized as the fastening system for asphalt shingles. The following, if rigidly adhered to, will help optimize the performance of asphalt shingles.

- All nails must be corrosion resistant.
- All nails are to be driven by hand or with pneumatic nailers.
- Failure to use a properly adjusted pneumatic air system, or to place nails accurately, can lead to sealing failure, raised tabs, buckling, leaks, and blowoffs.
- Roofing nails should have a minimum nominal shank diameter of 12 gauge, 0.105" with a minimum head diameter of $\frac{3}{8}$ "; the shank must have sufficient length to penetrate $\frac{3}{4}$ " into the wood deck lumber, or completely through the plywood decking.
- For each shingle, a minimum of four (4) nails must be applied. For other applications (i.e., in regions with high winds and/or other unusual weather conditions) the use of six (6) nails per shingle should be considered.
- Nails should be located as follows:
 - √ $5\frac{5}{8}$ " up from the butt edge with 5" exposure shingles – or midway between the 5" exposure and the tab sealant line. Do not nail in or above the sealant.
 - √ $6\frac{1}{8}$ " up from the butt edge with $5\frac{5}{8}$ " exposure metric shingles – or midway between the $5\frac{5}{8}$ " exposure and the tab sealant line. Do not nail in or above the sealant.
 - √ No nail head is to be closer than 1" from the edge of a shingle.
 - √ 1" in from each edge and over each cutout for three-tab shingles.
 - √ 1" and 12" in from each edge for two-tab and no-cutout shingles with nominal length of 36". Laminated shingles require that each nail penetrate through the double-ply or laminated area just above the top of the "dragon teeth." Nail placement is usually identified by a line or set of lines.
 - √ 1" and 13" in from each edge for two-tab and no-cutout metric length shingles; nails must penetrate the double-ply area of a laminated shingle as mentioned above.
- Nails are to be applied so that the entire head bears tightly against the shingle, without cutting into the shingle surface.

Also, see Figure 1 on back page.

Note: These recommendations were prepared by and have the approval of the Asphalt Roofing Manufacturers Association for informational purposes only. They are not 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.

Figure 1: Application of Nails

