



# Technical Bulletin

## Nail Application of Asphalt Shingles for New and Recover Roofing

Atlas requires that properly driven roofing nails be utilized as the fastening system for asphalt shingles. Nails are required in the International Building Code. Proper nailing is essential to good performance. To ensure proper nailing during shingle application, the following recommendations are emphasized:

- Nails should have a minimum nominal shank diameter of 11-or 12-gauge and a minimum head diameter of 3/8".
- Nails must be a minimum of 1 1/4" long. Atlas recommends a 2" nail for a roof-over.
- Nails must be corrosion resistant. Galvanizing by various processes is the typical means of achieving corrosion resistance. Aluminum roofing nails do not require additional coatings for corrosion resistance.
- Nails should be long enough to penetrate 3/4" into the roof deck. Where the deck is less than 3/4" thick, the nail should be long enough to penetrate fully and extend at least 1/8" through the roof deck.
- All nails are to be driven by hand or with pneumatic nailer.
- Failure to use a properly adjusted pneumatic air system, or to place nails accurately, can lead to sealing failures, raised tabs, buckling and blow-offs.
- The specific requirements for nails required per shingle are listed as printed on each shingle wrapper. This must be followed to ensure the intended performance and compliance to building codes.

### Nail Placement

- Never place nails where they will be visibly exposed or weathered.
- No nail should be closer than 1" from the edge of the shingle. Specific requirements for positioning the nails across the shingle are included in the installation instructions.
- Do not drive nails into knot holes, cracks or spaces in the roof deck. Nails are to be applied so that the entire head bears tightly against the shingle.
- Nails are not to be under driven, overdriven (to break or cut the shingle) or driven crooked.
- Incorrectly driven nails are to be repaired immediately. Under driven nails can be tapped down. Overdriven or crooked nails are to be removed. Repair the hole with asphalt roof cement complying with ASTM D4586 and place another nail nearby. If this is not practical, replace the entire shingle.

**Figure 1: Application of Nails**

