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Technical Advisory Bulletin

To: GAF Residential Sales, GAF Contractors, Field Services, CARE
From: Residential Consumer Services
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Appropriate Substrates For GAF Asphalt Shingles

Why Is The Substrate So Important?

A shingle roof substrate is the “foundation” for your roofing system. The substrate provides the smooth structural base on which asphalt shingles are installed. If the substrate is inferior, the integrity of the roofing system may be compromised.

What Is An Appropriate Deck For Shingles?

For new construction. Appropriate decks include:

- Minimum 3/8" thick (9.5 mm), exterior rated plywood complying with Department of Commerce Voluntary Standard PS-1: Structural Plywood.
- Minimum 3/8" thick (9.5 mm) exterior rated plywood or OSB sheathing complying with Department of Commerce Voluntary Standard PS-2: Performance Standard for Wood Structural Panels.

What About An Existing Deck?

When roofing over an existing deck, the following parameters should be met:

- The deck must provide a smooth and sound substrate. If there are distortions in the deck- that is, warping, shrinkage, or inconsistencies so that the deck is not smooth and sound- an approved deck must be installed over the deck boards.
- There should be no gaps or spaces between the deck boards or wood planks greater than 1/4" (6 mm). If there are gaps or spaces between the deck boards greater than 1/4" (6 mm), an appropriate deck must be installed over the deck boards.
- GAF does not recommend installation over existing spaced or skip sheathing and does not recommend the application method of filling in between existing spaced or skip sheathing.

Can Other Substrates Be Used Without Prior Approval?

When properly installed using the fasteners and construction design recommended by the deck manufacturer, the following substrates may be used (*GAF shingles are not approved for applications directly over any insulation or fiberboard.*):

- Loadmaster Shingle Deck
- LP® Tech Shield or equivalent Radiant Barrier Decking systems with vapor permeable, perforated foil backing
- 2" Minimum Homasote or ThermaSote (Homasote Co.)
- 2" Minimum Span Rock Gypsum Plank (USG) – (minimum 40 lbs. of pullout)
- Vented-R (Atlas)
- Hunter Vented Nail Base
- R-Shield Nailbase (BSI, Inc., PBS, LLC)
- Tectum III, Tectum E and Tectum NS (Tectum, Inc.)
- Huber Zip Deck System
- Structural Insulated Panels (SIP) - SIPs may be used when approved/rated by UL Solutions for use as a shingle roof deck, with the recommended minimum thickness of plywood or OSB, installed in accordance with the SIP panel manufacturers recommendations for use as a shingle roof deck.

What If The Plywood/OSB Is Over A Metal Deck?

It is important to be aware that the nails may hit the metal deck and potentially back out. In order to prevent this issue, spacers should be utilized between the plywood or OSB and the metal deck. This will help and maintain the integrity of the installation and ensure the wind coverage provided by the applicable limited warranty is preserved.

What About Codes?

Roof decks must meet local codes. Approval from the local building department should be obtained to confirm the deck construction meets local code requirements.

Is The Substrate Covered Under GAF Warranties?

The substrate must be installed in accordance with the deck manufacturer's specifications. Roof deck installation instructions for specific deck types must be obtained from the respective manufacturer. GAF limited warranties do not cover the substrate over which GAF products are installed, nor do they cover problems with the GAF products caused by the substrate.

Questions?

GAF Residential Consumer Services can assist you with these and other questions you may have. Residential Consumer Services can be contacted at 877-423-7663 or TechnicalQuestions@gaf.com. The GAF website is a great resource for just about any question you may have or for additional information you may require. Please visit gaf.com to find the latest information on our products and their installation.

Important: This document supersedes any prior GAF Technical Advisory Bulletins on this topic. Please always check gaf.com to make sure you have the most up to date information.