

## Storage and Application of Asphalt Roofing Shingles in Hot Weather

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### **Introduction**

Asphalt shingles have been successfully used in various climate zones around the world, including in desert and tropical regions, for over one hundred years. Improved application efficiency and enhanced long-term shingle performance can be achieved by following the recommendations outlined below for hot weather storage and application.

### **Storing Shingles Prior to Use**

It is recommended to store shingles in a cool, dry place. Always follow the manufacturer's precautions about stacking bundles and pallets; stacking bundles too high or double-stacking pallets can indent or deform the shingles over time, particularly in warm weather or when shingles are exposed to direct sunlight. If higher stacking is necessary, use racks or bins so that the weight of the bundles on the upper pallets does not bear down on the bundles below. Systematically rotate all stock so the material stored the longest will be the first used. (i.e., first in, first out).

Although after installation asphalt shingles are designed to withstand direct exposure to the hot summer sun, before installation it is best not to store the products in direct sunlight for any extended length of time. Extended storage in direct sunlight may also cause weathering and weakening of the packaging materials, making handling the bundles awkward before installation.

### **Removing Shingles from Bundles**

Although shingles have a release film to prevent them from sticking to each other in the package, direct sun can cause the sealant to become more aggressive, making the shingles more challenging to separate and remove from the bundle. It is important to follow the manufacturer's recommendations when removing shingles from a warm bundle.

### **Placing Shingles on a Roof Prior to Application**

Shingles should be kept in bundles or handled in pairs and stacked squarely to maintain shingle sealant alignment with the release tape until applied. Asphalt shingles become more flexible in hot weather, so avoid rough handling that may tear the shingles or break the laminating adhesive bond on multi-layer shingles.

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Keep bundles as flat as possible while loading them onto the roof. Do not drape shingles or bundles over the hips or ridges. Keep shingles in their packaging until ready to be applied.

## During Application

Many roof installations use self-adhered water protection membranes, either at the eaves or other critical roof areas. The adhesive underside of these membranes will be more aggressive in hot weather, so extra care may be required when installing the membranes. In hot weather applications, the asphalt coating on the shingles will soften. Wear soft-soled footwear to minimize foot slippage possibilities and scuffing of the shingles. On steeper roofs, and areas with the greatest amount of foot traffic, such as valleys, use reasonable care to minimize scuffing.

For comfort reasons as well as the safety reasons noted above, on forecasted hot and sunny days, it is advisable to install shingles early in the day before the temperature reaches its maximum. One should also plan the roof installation to “work around the sun,” i.e., work on the west—and south-facing slopes in the morning and the east-and north-facing slopes later in the day. Many professional roofing contractors have learned that kneeling or sitting on a pad can protect their bodies from the hot roof surface and reduce shingle scuffing.

In hot weather, shingle pieces trimmed for hips, ridges, rakes, and valleys can quickly adhere to shingles already applied if left on the roof with their sealant strip facedown. Use good housekeeping practices to minimize shingle debris on the roof.

As roof temperatures vary, pressure settings of pneumatic tools should be adjusted to avoid overdriving or underdriving fasteners.

Most asphalt shingles are manufactured with a thermally activated asphaltic sealant, which bonds them together once they are applied to the roof and exposed to a sufficient period of heat from sunlight.

If existing shingled roofs require repairs or other rooftop work during hot, sunny weather, the shingles will be susceptible to the same scuffing as noted above. Because the shingle sealant bond on existing roofs is likely to be fully activated, shingle removal or repair will be difficult without causing shingle tearing and damage at the sealant interface. In such cases, waiting until the shingles are cooler may be best before attempting shingle repair. If waiting is not feasible, spraying a light mist of water on the shingle surface can help it cool and potentially facilitate the separation of the sealant bond. **Caution:** A wet roof surface can be slippery, so take the appropriate precautions.

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