



# technical bulletin

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## ***Recommendations for Storage and Application of Asphalt Roofing Shingles in Hot Weather***

### **Introduction**

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

### **Storage Prior to Use**

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. As a general rule in hot weather, store shingles in a cool dry place in stacks no more than four feet high. If higher stacking is necessary, it is recommended to 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 that the material that has been stored the longest will be the first to be moved out (i.e. first in, first out).

Although asphalt shingles are designed to withstand direct exposure to the hot summer sun after installation, it is best not to store the products in direct sunlight prior to installation. Storage in direct sunlight may also cause a weathering and weakening of the packaging materials, making it awkward to handle the bundles prior to 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 difficult to separate and remove from the bundle. When removing shingles from a warm bundle, follow the manufacturer's recommendations; some products may separate better or more easily when removed from the bundle "granule side up" or by quickly snapping the shingles out of the bundle stack. This helps break the weak bond which may have formed between shingle sealant and release films, allowing easier separation and minimizing potential shingle damage.

### **Placement of Shingles on Roof Prior to Installation**

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.

Keep bundles as flat as possible during the roof loading process and on 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**

Always be careful when working on sloped roofs. 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 where worker footprints, such as toe or heel marks, are likely to be more concentrated in small areas., use reasonable care to minimize scuffing and, if necessary, wait until the shingles and ambient temperatures cool. Ensure roof safety by following all required safety precautions; such precautions should include use of fall protection devices.

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.

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

### **Other Considerations**

Most asphalt shingles are manufactured with a thermally activated asphaltic sealant which bonds the shingles together once they are applied to the roof and exposed to a sufficient period of heat from sunlight. If this sealant has been affected (blinded) by wind-blown dust from the surrounding environment or the job site (e.g. saw dust), the sealant may not activate even on hot sunny days and the shingles will need to be manually sealed per the shingle manufacturer’s instructions. On north-facing or steeper slopes the shingles may not seal immediately even in warmer weather and may require manual sealing as well.

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

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