

# Roof Maxx

## Pliability: Testing Results

Three-tab, 17-year-old asphalt shingles were treated with Roof Maxx, then tested to determine their pliability. Results indicate that Roof Maxx treatment increases shingles' ability to flex and resist breaking.

### IMPORTANCE OF PLIABILITY IN ASPHALT SHINGLES

Pliability has significant impacts on a shingle's performance and longevity. Flexible shingles can better withstand the thermal expansion and contraction caused by temperature fluctuations, reducing the likelihood of cracks and leaks. Increased pliability also enhances a roof's weather resistance, allowing it to endure physical stresses such as wind uplift and impact from debris. Additionally, the ability to flex without cracking contributes to the overall durability and effectiveness of the roofing system.

### TESTING PROCESS

The process followed the testing procedure outlined in ASTM D3462: Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules. Pliability is assessed by bending shingles over a cylinder until their edges are at a 90° angle, then examining them for cracks or tears.

- Three-tab 17-year-old asphalt shingles were sent to an accredited laboratory for testing.
- Half of the shingles were sprayed with Roof Maxx, and the other half were untreated (control).

- Within those groups, half were cut parallel to the shingle length (machine direction – MD), and the remainder were cut perpendicular to the shingle length (cross machine direction – CMD).
- Within those groups, half were tested with the granules facing up (weather side up) and half with the granules facing down (weather side down).

### RESULTS

|                       | Roof Maxx Treated | Untreated |
|-----------------------|-------------------|-----------|
| Weather Side Up MD    | PASS              | PASS      |
| Weather Side Up CMD   | PASS              | PASS      |
| Weather Side Down MD  | PASS              | FAIL      |
| Weather Side Down CMD | PASS              | FAIL      |

While the untreated shingles cracked when tested weather side down, the treated shingles passed in all four scenarios. The weather side down test simulates how shingles bend in high winds. Results indicate that Roof Maxx treatment significantly improves not only pliability but also wind resistance.

### About Roof Maxx

Roof Maxx treatment is an earth-friendly, effective, and affordable alternative to roof replacement or the application of traditional roof sealants. Derived from soybean oil, this shingle sealer-rejuvenator is certified USDA BioPreferred. The treatment is spray-applied to asphalt-based roofing materials to extend service life up to 15 years. This breakthrough product re-saturates curled, leaky shingles, restoring pliability and flexibility, and enhances adhesion of the protective mineral granules.