

GRANULAR ADHESION

Analysis Report



FOR FRESH ROOF

Performed by Certerra: accredited,
independent, third-party testing & evaluation

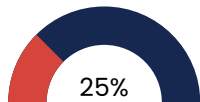


INTRODUCTION

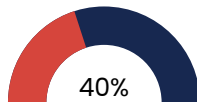
Granular adhesion is basically how well the asphalt on a shingle holds on to the protective granules. These granules are important because they protect the shingle from things like the sun's UV rays and bad weather. If the granules don't stick well and fall off too quickly, the shingle will wear out faster, leading to leaks and more damage from the weather. Keeping a strong bond between the asphalt and the granules helps the shingle last longer.

CONCLUSION

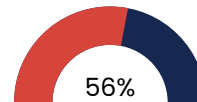
- For Fresh Roof, the results of the granular adhesion test show impressive improvements in the retention of granules compared to untreated shingles of the same age. The following performance enhancements have been observed:



**Better Adhesion
for New Shingles**



**Better Adhesion for
Shingles Aged 15 Years**



**Better Adhesion for
Shingles Aged 30 Years or
Nearing Their End of Life**

- The results show that soy technology helps shingles hold on to their granules better over time compared to untreated shingles. This stronger grip means the roof will last longer, wear out less, and be better protected, so you won't have to worry about as much damage or maintenance.