

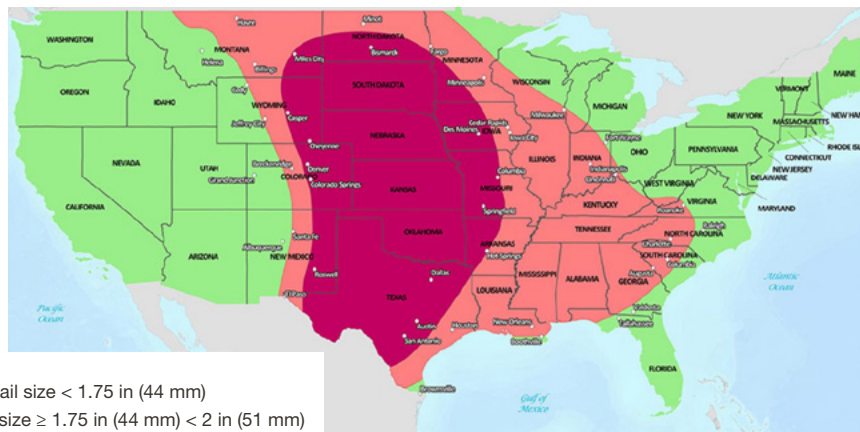
Technical Bulletin

WESTLAKE ROYAL ROOFING SOLUTIONS[™] AND VSH (VERY SEVERE HAIL)

Issued: May 12, 2022

Through its subsidiary code approved testing agency, FM Approvals, FM Global, a worldwide insurer, has implemented a Very Severe Hail (VSH) impact-resistance classification that may affect many of the projects that Westlake Royal Roofing Solutions[™] customers will see.

In the past, FM Global has recommended that its insured building owners use moderate hail (Class 3) and severe hail (Class 4) classified roof systems for buildings in areas that they consider to be at elevated risk for moderate or severe hail impacts. In the FM Loss Prevention Data Sheet 1-34 (FM 1-34), "Hail Damage," (revised July 2021) FM provides a map that identifies these zones. With increased frequency, the United States insurance industry has experienced losses from hail in terms of the number of claims and costs related to the claims. Most of the hail damage occurs to roof systems and other rooftop components. In the latest version of FM 1-34, FM Global has identified a new VSH region, including all of Oklahoma, Kansas, Nebraska, and South Dakota, and parts of New Mexico, Colorado, Wyoming, North Dakota, Minnesota, Iowa, Missouri, and Arkansas, with a very large portion of Texas. See VSH zone in red.



FM Global states that this targeted area is supported by data from the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service and the National Center for Environmental Protection's Storm Prediction Center.

In late 2021, FM Approvals released the new FM4473 standard. Within this standard, FM presents the increase testing requirements for VSH rated sloped roof systems. The criteria has increased the kinetic energy by a factor of two, or two times the amount of force that is delivered by the ice ball, or 53-58 ft. lbs. of force. This means that the 2-inch ice ball is shot at the test subject at a speed from 152-160 feet per second. Each test subject is shot twice in three separate locations.

In March of 2022, Westlake Royal Roofing Solutions[™], subjected the Unified Steel[™] Stone Coated Roofing panels to the testing for this standard. QAI Testing Laboratories observed the testing and reviewed the results and has determined that the tested panels and systems meet the criteria set forth in the FM Standard. These results are posted in the Unified Steel[™] QAI evaluation report CERus-1008.

It should be noted that Westlake Royal Roofing Solutions is working within our other product offerings to meet these same high demands.

Current Technical Bulletins are listed on our website at WestlakeRoyalRoofing.com and we reserve the right to amend or update these documents at any time.

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