



Metal Roofing FAQ

HAIL TO THE METAL ROOF

By: Tom Black,
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Tom Black, Executive Director of the Metal Roofing Alliance answers frequently asked questions about the use of metal roofing in residential applications.

A recent wave of hailstorms resulted in widespread damage to homes and businesses. Hail can break, split and cause tear-off damage to traditional roofing materials, resulting in big repair or replacement costs. Contractors and homeowners have discovered that metal roofs can protect homes from extreme weather events.

“Most of the damage to a traditional roof in a hailstorm is caused by water damage to the contents of the house when shingles are fractured,” said Bill Hippard, President of the Metal Roofing Alliance. “Once a roof has a crack, water can stream into the home, damaging the structure and its contents. Water damage can lead to mold and serious repair bills.”

Metal roofs are very tough and highly resistant to hail damage. Hail will not penetrate a metal roof. Even a new asphalt shingle roof won't protect a home from the next hailstorm. In fact, many metal roofing products have the highest impact resistance and hail rating (Class 4) granted by Underwriters' Laboratory (UL). This means that a sample of the product did not crack when hit twice in the same spot by a 2-inch steel ball, which, in a storm, would translate into a huge hailstone. As a result of metal roofing's superior performance in hail prone areas, some insurance companies even provide a reduced rate for homes protected by metal roofs.

The Roofing Industry Committee on Weather Issues, Inc. recently published

the results of a comprehensive study on the impact of hail on various roofing materials. RICOWI's latest report included data from its inaugural Hailstorm Investigation Program (HIP). Four inspection teams examined over one hundred roofing systems during a four-day period to evaluate the effects of a significant hailstorm that passed through portions of Oklahoma City. The purpose of the project was to document the effects of hail impact on a variety of roofing products, and to describe roof assembly performance and modes of damage for substantiated hailstone sizes.

Four steep slope metal roofs were inspected: three metal shingle panels and one standing seam copper roof. Maximum hailstone sizes impacting the roofs ranged from 0.75" to 1.75" in diameter. Surface spatter marks were visible where hailstones had removed some of the surface patina of the metal or surface grime and oxidation from the painted surfaces. Dents occurred from hail impact on three of the four roofs, with one metal shingle panel having no dents with 1.25 inch diameter hail. On the other roofs, the hail caused dents were found to be a cosmetic issue, with no functional damage. Panel joints had not been distorted sufficiently to affect the water shedding ability of the panels.

Hail effects on metal roof systems were seen as cosmetic, rather than functional. Indentations occurred with larger hailstones, but painted coatings or stone-coatings had not been compromised by the denting.

For more information, visit www.metalroofing.com.

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