

The Hail Preparation Guide



We can show you more.®

RISK CONTROL



Every year the United States is pelted by hail storms that ravage both private and commercial roofs, siding and equipment. Hail stones can range in size from very small granules the size of sand causing no property damage to softball size stones causing catastrophic damage. There are several actions that can be taken to mitigate the damage resulting from hail strikes for stones up to two inches in diameter.

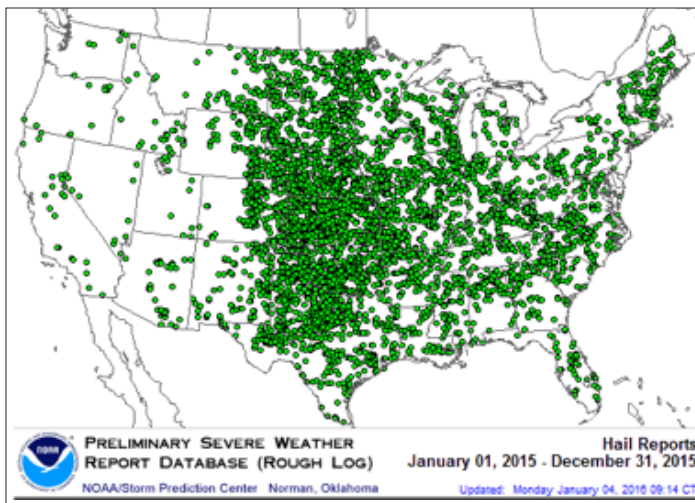


Image source: National Weather Service/National Oceanic and Atmospheric Administration website. Reported incidents of 1" hail from 1/1/2015 through 12/31/2015.

First and foremost, your roof is the most obvious building component subject to severe hail damage. There are currently no "hail-proof" roofing systems available, but recent developments and roofing component improvements have led to the development of "impact resistant" roof systems that can resist damage from many hail storms, including those with hail up to two inches in diameter. Of course, the storms with baseball and softball size hail stones will cause damage, even to these impact resistant systems. Current roofing systems with an Impact Resistance Class 4 UL rating or systems passing FM Approvals Number 4470 (low slope) with a 1-SH (severe hail)

rating provide the highest resistance to impact damage. For steep slope rigid roof systems such as slate, concrete or clay tile, the highest resistance is provided by products meeting the FM Global test Standard 4473 with a Class 4 rating. Most businesses are not in a position to completely re-roof their facility to obtain the protection afforded by these roofs. Upgrading to an impact resistant system should be considered for all future roof replacement projects and new construction, especially in high frequency hail areas. In the interim, it is recommended that roofs with rock ballast be maintained to provide an even ballast cover. Roof maintenance is also important, especially repairing any blisters or other imperfections that can be weak points when subjected to hail stone impact.

Secondly, all roof and ground mounted machinery and equipment is subject to hail damage. You should evaluate the critical nature of the equipment to your operations and the effects of damage to the equipment for your business. You should consider providing hail protection for this equipment based on the priority of importance to your operations. Items such as HVAC, cooling towers, process exhaust, environmental control, refrigeration and other such equipment may need protection. Wide arrays of products are available to protect your specific equipment, or protection can be manufactured as specified. When hail strikes an unprotected surface of a condenser coil, the aluminum fins are easily bent. The severity, depth of the deformity and the total surface area affected, are the primary factors that determine whether to repair or replace the damaged coil. The extent of damage caused by hail to the

condenser coil will determine if the fins require straightening or replacing as a result of direct hail damage, which impedes proper air flow through the coil.



Extensive coil fin hail damage to roof and mounted HVAC unit

Lastly, skylights are highly subject to hail damage, which often results in considerable interior water damage. There are many products available to provide protection for these units while still allowing them to function in the manner intended. Both retrofit and new installation skylights are available with the SH

(severe hail) FM approval. Both the machinery, equipment and skylight protection can be provided with the protection features as a retrofit, and these expenditures can be budgeted, based on priority, over a relatively short timeframe to achieve an increased level of protection and minimize the potential for loss and interruption to your business.



Hail Guard for HVAC Unit



Hail Guard for Skylight

Due to the nature of damaging hail storms, last minute protection actions are not feasible and pre-planning for the event with prevention measures is the key to successful mitigation of the loss. Hail is a significant peril to your roof, skylights, equipment and operation of your business. The preventive measures initiated prior to a hail incident can have a tremendous impact on overall loss expectancy at your facility by limiting the actual physical damage. These preventive actions also can limit the potential for lengthy business interruption that may impact your business far greater than the actual physical damage.

To learn more about how CNA's Risk Control services can help you manage your risks and increase efficiencies, please contact CNA Risk Control at 866-262-0540, or visit www.cna.com/riskcontrol.

