

# AmTrust Property Zone

## Protect and Maintain Roof Mounted Equipment

You probably don't spend a lot of time thinking about the equipment on your roof. This can be a mistake. Due to its location, equipment on the roof is exposed to elements every day. As a result, roof equipment has the potential to be damaged at any time and cause damage to the supporting building.

### Types of Rooftop Equipment

Several different types of equipment are commonly mounted on rooftops. These equipment types include the following:

- HVAC Systems
- Exhaust Fans
- Solar Panels
- Antennas and Satellite Dishes

### The Risks Associated with Rooftop Equipment

When rooftop equipment is unmonitored, weather and climate-related problems can impair the equipment, the building and even your business operations.

- Rooftop equipment is often expensive, which may pose a significant cost to repair or replace
- Damaged equipment may perform poorly, resulting in higher energy costs and other expenses
- Improperly secured equipment may cause damage to the structure of the roof as well as water damage to the building
- Inadequately secured equipment may detach during a storm or high wind event
- Detached equipment can become a hazard and cause property damage or bodily injury
- Prohibit storing loose materials on the roof to prevent them damaging the roof, building, or injury to persons if blown off.
- Implement Contractual Risk Transfer Agreements, approved by your legal counsel, with vendors, contractors, etc., who install equipment, such as HVAC, cellular and television antennas.

### Inspect Your Rooftop Equipment

Make sure your rooftop equipment is properly installed and remains secured in place by performing inspections. Inspection frequency can vary based on size, condition, age, location and exposures.

- Before a severe storm such as a hurricane, roofing equipment needs to be carefully inspected and prepared. Arrange a qualified and insured contractor to inspect all rooftop equipment for proper

securement, make recommended improvements. After a storm, check the equipment and make any repairs that are needed.

- In colder climates, heavy equipment adds weight to your roof and may decrease the snow load that it can safely support. Additionally, rooftop equipment may cause snow to drift or to accumulate in certain areas.
- Keep the roof and rooftop equipment clear of debris.
- Check the equipment for signs of corrosion or damage and make sure that fastenings are tight.
- Throughout the year, inspect the equipment for damage, which could cause poor performance.



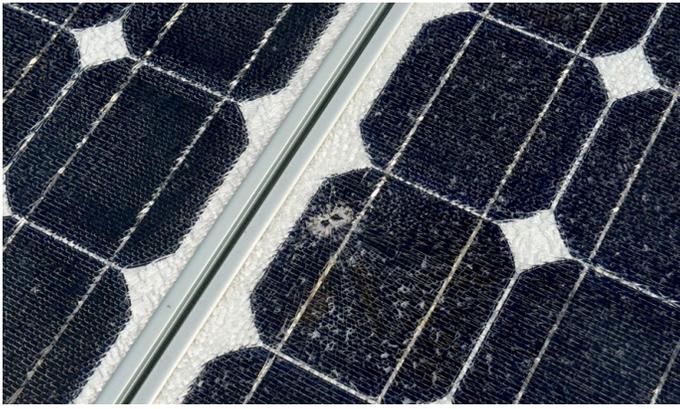
### Enlist the Help You Need

As a business owner or manager, you should take an active role in maintaining the condition of your roof and rooftop equipment by doing the following:

- Know what type of roof and rooftop equipment you have
- Learn what equipment danger signs to look out for and when to take action to repair and replace
- Understand the maintenance schedule and verify that the property inspections and repairs are done
- Monitor the roof for signs of damage, clear debris, and check that rooftop equipment is installed and secured correctly

Depending on the size and qualifications of your maintenance staff, you may be able to handle some basic upkeep and storm preparations in-house. However, for other tasks, you will need a licensed professional.

- A qualified architect or engineer should check your roof for wind vulnerabilities
- A licensed roof contractor should perform inspections and repairs



When hiring professionals, always verify licensing, insurance, check reviews and gather recommendations. Get suggestions and repair costs in writing.

## Hail

Damaging hailstorms are common in Arkansas, Colorado, Iowa, Kansas, Louisiana, Minnesota, Missouri, Mississippi, North Dakota, Nebraska, New Mexico, Oklahoma, South Dakota, Texas and Wyoming. Soft aluminum HVAC coils are susceptible to bending and denting when struck by hail, reducing their efficiency. Skylights can break, allowing damaging water into buildings. Protection against hail damage can be accomplished using hail guards.

### Hail Guards - HVAC

Install intake filters with hail protection or commercial hail guards or steel wire mesh over cooling fins on heating, ventilating and air conditioning (HVAC) equipment. When wire mesh is used, use minimum No. 11 gauge diameter steel wire mesh with maximum openings of ½ inch by 1 inch.

### Hail Guards – Critical Equipment and Skylights

Hail activity in your area should be determined before making solar panel purchases. Install commercial hail screens or guards over skylights and critical outdoor equipment that is vulnerable to damage during hailstorms. When wire mesh guards are used, use a minimum No. 11 gauge diameter steel wire mesh with maximum openings of 1/2 inch by 1 inch.

Hail activity in your area should be determined before making solar panel purchases. Solar Panels with at least Moderate Hail (MH) Ratings are recommended. Severe Hail (SH) Rated Panels are critical in areas prone to hailstones greater than 1 3/4 inch diameter.

### Sources

[https://www.fema.gov/media-library-data/1527685548754-4c209e6758885a243000b159c2d4ed6f/PR-RA1RooftopEquipmentMaintenanceandAttachmentinHigh-WindRegions5\\_23Compliant.pdf](https://www.fema.gov/media-library-data/1527685548754-4c209e6758885a243000b159c2d4ed6f/PR-RA1RooftopEquipmentMaintenanceandAttachmentinHigh-WindRegions5_23Compliant.pdf)

For additional information and resources on this topic and other safety and risk management subjects be sure to visit the Loss Control section on our website:

[www.amtrustfinancial.com/loss-control](http://www.amtrustfinancial.com/loss-control)



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