



Customer Focus

on Loss Control

Innovative Safety and Health SolutionsSM

Preventing Roof Collapses Due to Snow

Preparing for Winter Storms

- Understand the causes of roof collapse: heavy snowfall, drifted or wet snow, and ponding water as snow melts. Rain following snow is very hazardous; the snow absorbs rain, becoming dense and heavy.
- Review roof design to determine if it can support the weight of snow, ice, and water.
- Inspect roofs, looking for weaknesses.
- Reinforce roofs as needed, particularly where drifting (and increased weight) is likely.
- Inspect gutters, drains, downspouts, and scuppers, making sure that they are clear and in good condition. Consider putting heat tracing in downspouts and gutters to keep them clear of ice.
- Determine a safe snow depth for each roof. Plan to begin snow removal when accumulated snow reaches half this depth.
- Have a snow removal plan. Be sure the plan includes roofs, skylights, canopies, and overhangs. Specify who is responsible for monitoring, snow removal, etc.
- Plan to put the snow removal plan into effect immediately; this is especially important in windy weather when snow will drift and accumulate.

During Storm Conditions

- Monitor weather and roof conditions continuously.
- On the roof, check for snow depth, drifting, puddles, ponding, and/or ice accumulation.
- Inspect roofs for leaks or structural deficiencies that may develop as snow and ice accumulate.
- Keep gutters, drains, downspouts, and scuppers clear of leaves, snow, ice, silt, or other debris.
- Connect roof overhang heating wires.

Snow Removal

- Do not send workers onto the roof if it is in danger of collapse.
- Remove snow and ice from roofs, skylights, canopies, and overhangs as soon as possible.
- Remove only as much snow as needed to prevent collapse; too much digging and scraping could damage the roof.
- Pay special attention to removing snow in areas where lower and higher roof portions join, where drifting and blowing snow can accumulate.
- Clear paths to drains, and areas around drains.
- On pitched roofs that do not have drains, open paths to the eaves to allow drainage.
- Do not use tools that may damage the roof, such as ice choppers.
- Set snowblower blades high enough so that they won't damage the roof.

If a Roof Collapse Occurs or is Imminent

- Evacuate the building.
- Shut off water, gas, electricity, processing systems, etc., but keep *on* as much of the automatic sprinkler system as possible.
- Be extra careful to avoid fire hazards in areas where sprinklers have been shut off.
- Move equipment and stored goods, or cover with tarpaulins to protect from the elements.
- Shore up building and roof sections, if this can be done safely.

After the Storm

- Inspect for, document, and repair damage to structure, roofs, skylights, canopies, overhangs.
- Prepare for the next storm. Replenish supplies, inspect and maintain equipment.
- Evaluate the success of the snow removal operation; make changes as needed.

