



Lightning and Steel Roofing

When a homeowner is considering the purchase of a steel roof a common question is whether it will increase the risk of a lightning strike. After all, steel is highly conductive, just like the materials used in lightning rods, so doesn't it stand to reason that the steel roof will attract lightning? The short answer is, NO, steel roofing will NOT increase the risk of a lightning strike in any way.

For all intents and purposes, nothing 'attracts' lightning. Lightning occurs on too large of a scale to be influenced by small objects on the ground, including steel roofs. The location of the thunderstorm overhead alone determines where lightning will hit the ground. A lightning bolt that is several miles long, generated by a cloud that is more than 6 to 10 miles high, is not going to be influenced by an object the size of your house.



The descending stepped leader of a lightning bolt doesn't 'decide what to strike' until it is very close to the ground. When a cloud-to-ground lightning channel is forming, it is going to strike the ground where the opposing charges are greatest, directly underneath the storm's most electrically active region. If you are standing at that exact location, you will be hit, even if there's no metal within miles! Conversely, if you are farther than 500 feet from that location, you could wave your golf club or umbrella high in the air, but you won't draw the lightning away, even slightly, from striking where it's going to strike.

Steel does conduct electricity, but steel roofs don't attract lightning or increase the probability of a lightning strike. Four factors affect the probability of a lightning strike:

- Topography: a structure located on a mountain or hill has a higher probability of a strike than one in a field.
- Structure size and height: a tall structure or one that covers a great deal of ground has a higher probability of a strike than a short or small building.
- Relative location in relation to taller structures: a small, short building near a taller structure has a lower probability of strike than the taller structure.
- Severity and frequency of thunderstorms in the structure's vicinity.

However, on occasion, lightning does strike a house. If your home were hit, the steel roofing would disperse the energy safely through the structure. Since steel roofing isn't combustible or flammable, it's a low risk and desirable roofing option where severe weather is concerned -- especially for lightning.

For More Information

For additional information on steel roofing or other sheet steel building products, visit our website at www.cssbi.ca.