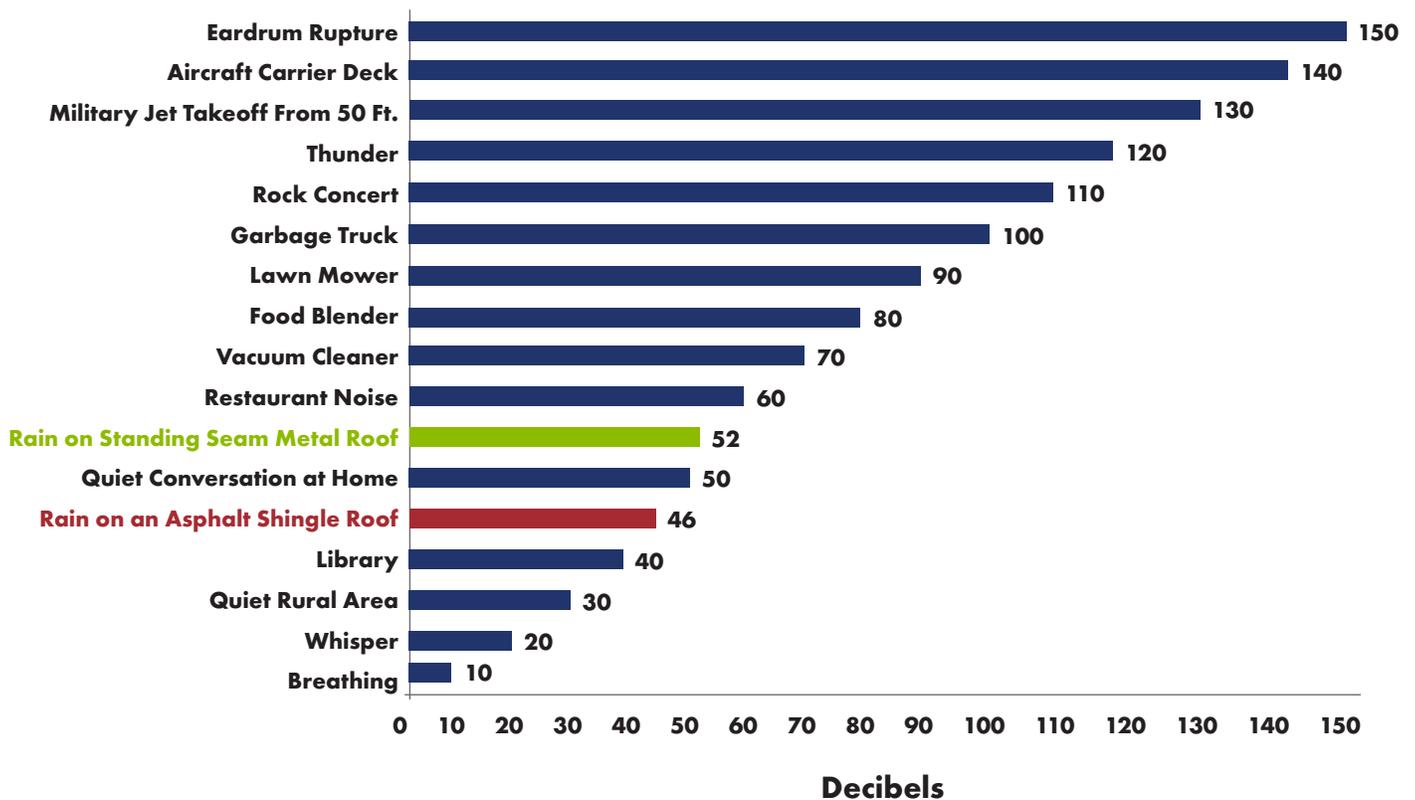


Are Metal Roofs Noisy When it Rains?

One of the most common questions when it comes to metal roofing is “Are metal roofs noisy when it rains?” The answer to this question is no. This myth stems from the metal roofs that were traditionally used to cover barns and sheds. In these instances, the roofs were installed over the open barn frame and produced a louder sound when it rained. However,

Studies performed by The Acoustic Group at the University of Luleå in Sweden determined that rain on a standing seam metal roof produces an average sound intensity of only 52 decibels (1). This is equivalent to the sound of a quiet conversation at home, which registers an average sound intensity of 50 decibels (2). In comparison, sound is not



when a metal roof is installed on a house, it is installed over a solid wood roof deck, which absorbs most of the sound produced by rainfall (1). For this reason, metal roofs are not louder, and may actually be quieter than other roof types (3).

interpreted as annoying by most people until it reaches the upper 70 decibels, which is four times louder than rain on a metal roof (2). With the exception of standing seam roofs, many metal roofing products can reduce noise in the home by avoiding surface-surface sound transmission. When rain hits asphalt shingles, which are laid flush with the roof

deck, the sound is transmitted directly through the solid shingle into the solid roof deck and into the home. Since sound travels most quickly through solid surfaces, a large portion of the original sound is transferred with minimal dampening. Alternatively, shake, slate, and tile metal roofs allow for air gaps between the metal roof surface and the deck surface. Since sound travels most slowly through gases, the air gaps deaden the sound of rain and can reduce noise in the home. Metal roofs provide many differences when compared to other roofing materials, most of which are advantageous. But, in terms of the sound of rain falling on a home's roof, metal roofs are no different and transmit virtually the same sound intensity as other roofing materials.

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Source

1. "Sound Emission of Metal Roofing." ATAS International, Inc.. N.p., n.d. Web. 20 Aug. 2015. <<http://www.atas.com/ATAS/files/84/84fdf524-156e-4967-bad2-2af5ad7b9d74.pdf>>.
2. "Noise Sources and Their Effects." Purdue University, Feb. 2000. Web. 20 Aug. 2015.
3. Provey, Joe. "Metal Roofs 101." bob vila. N.p., n.d. Web. 20 Aug. 2015.