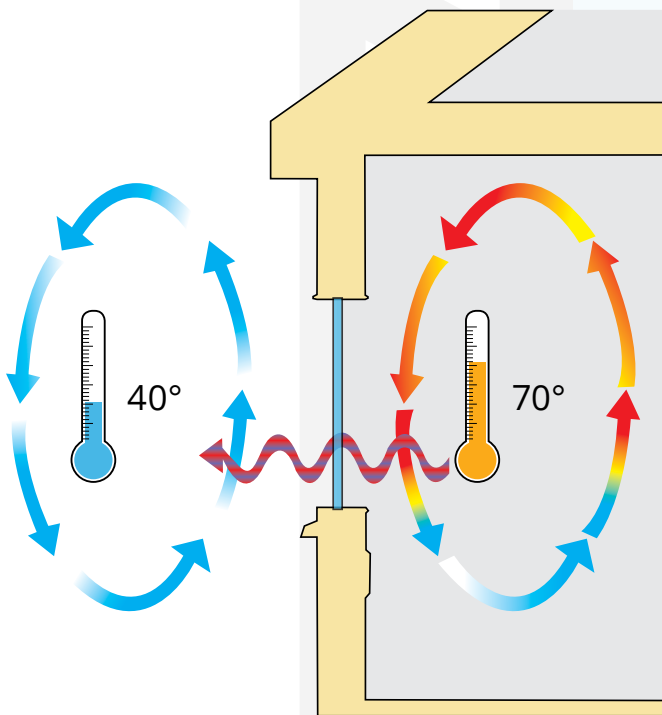




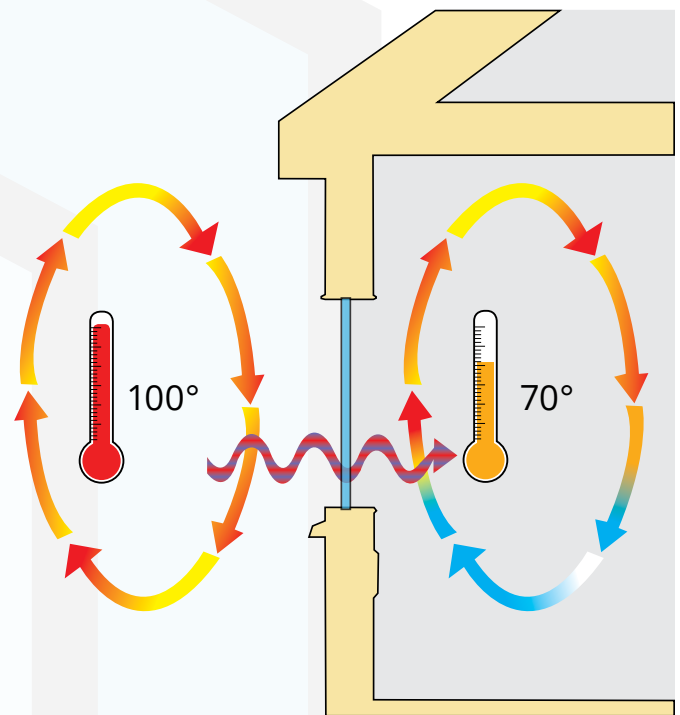
## Why Inefficient Windows Feel Leaky

### Convective Looping

If it's Cooler Outside



If it's Hotter Outside



Homeowners often approach us in their search for energy efficient windows because they are trying to address their current “leaky” windows. While Magnetite’s acrylic insulating window panels are amazingly energy efficient and also stop the leaks in a window, often times these perceived leaks are something else entirely. What is thought of as a leaky window may really just be a convective loop caused by an inefficient window.

Here’s how it works:

When your home is cooler than the ambient temperature outside, the hot air outside heats up your window.

Your window then heats up the air inside of your home.

This hot air in your home rises towards your ceiling until it is cooled by your air conditioning and it drops back down.

This cooler air then comes near your window again, heats up again, and rises again.

This phenomena, known as a “convective loop,” makes it feel like air is moving through a leak in your window when in fact the air is just moving because you window is inefficient. The greater the temperature difference between inside and outside and the less efficient your window is, the faster the convective loop moves. This convective loop not only makes your window feel leaky, but it also does a great job of making your rooms hotter during the summer and colder during the winter.

If you are looking for a way to increase the efficiency of your windows and stop convective loops in your home, then Magnetite’s acrylic insulating window panels are the right product for the job.