Roof Leaks: Why Do They Occur?  
How Can You Stop Them?

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More often than not, roof maintenance is not thought about until a leak has already developed. The problem with this is that by the time a leak is apparent, the damage is much more difficult and costly to repair. Therefore, it is worthwhile for property owners to be aware of what causes leaks to develop, and what preventative measures they can take; doing so will save them a lot of money in the long term.

To better understand roof leaks, it is first necessary to describe the most common type of roof - the built up asphalt roof. The built up asphalt roof is made up of 3-4 layers of asphalt sheeting bonded together with hot mopped tar that ideally form a waterproof barrier. The cover sheet, or top roof layer, of most built-up asphalt roofs is covered with a fine mineral granule that is embedded into the asphalt during the manufacturing process. This colored mineral serves as a protective barrier between the cover sheet asphalt and the weather.

The service life of a typical built-up asphalt roof is about 8 to 10 years. During this time, regular maintenance is required to re-seal rooftop penetrations such as skylights, vent pipes and roof vents. These problem areas are normally treated using a plasticized cold asphalt, but these, and also other petroleum based roofing products, become, over time, brittle, non-flexible and permeable by moisture.

When this happens, the protective mineral barrier on the top layer starts to come off. As the asphalt starts to becomes exposed, it is subjected to UV rays from the sun, and general wear and tear from other types of weather, such as rain, hail and snow. This causes the breakdown of the asphalt to be accelerated; not just the top layer, but those under it too. It is shortly after this point that property owners will begin to discover all is not well with their roof.
So, how what pro-active action can home and business owners undertake? Firstly, it is advisable for them to perform an annual inspection of the roof and coating. Secondly, they should apply a non-petroleum based protective treatment to it.

If a leak has already led to the need for expensive repairs to be carried out, property owners may want to look at using modern durable and energy saving solar reflective roof coating systems. These offer a cost effective solution and require much lower levels of ongoing maintenance.