

Figure 1: Reflectance and Emittance of building materials

Even though many metals have a high solar reflectance, they will not reject heat effectively if emittance is low. For example, polished aluminum foil has a very high solar reflectance, but its emittance is low, so it retains heat. Note its placement in the lower portion of the graph. The best-performing material for cooling load reduction have both high albedo and high emittance, and they are in the upper left-hand section of the graph.

