

## TECHNICAL BULLETIN: RADIANT BARRIERS

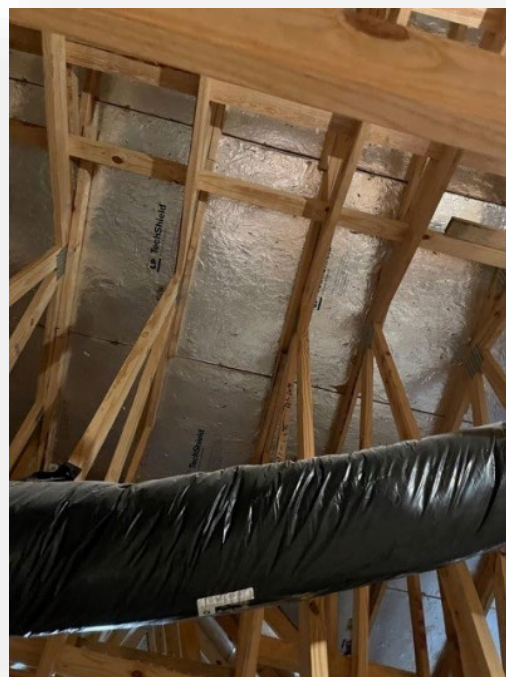
Heat transfer in homes occurs by convection, conduction, and/or radiation. Radiation is the primary source of heat transfer in an attic and can reduce the overall energy efficiency of a home. Across the United States, builders have been installing radiant barriers in attics to improve home performance and increase comfort.

When appropriately installed, radiant barriers can block up to 97% thermal radiation, reduce the temperature in an attic by 30 degrees, and improve the efficiency of the HVAC system by 10-15%. A radiant barrier should always be installed at the underside of the roof deck to reflect the sun's heat most effectively. There are many types of radiant barriers. Whichever barrier system is used, it's critical to ensure an air gap between the barrier and insulation. If no air gap is present, the product will not be effective, and heat may transfer via conduction.

One of the most common radiant barriers used by some builders in the U.S. are thermal barrier roof boards. Most major sheathing manufacturers offer these boards as part of their high-performance roof strategies. Below are some examples of this system.



*Figure 2 Thermal barrier roof board. The underside of this sheathing has a layer of reflective foil.*



*Figure 1 LP TechShield is amongst one of the most popular radiant barrier systems used U.S amongst builders.*