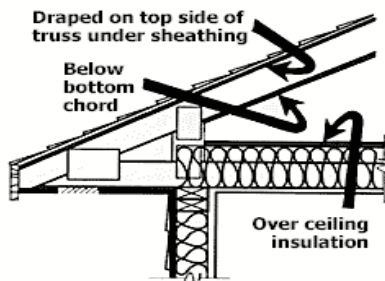


## NASA &

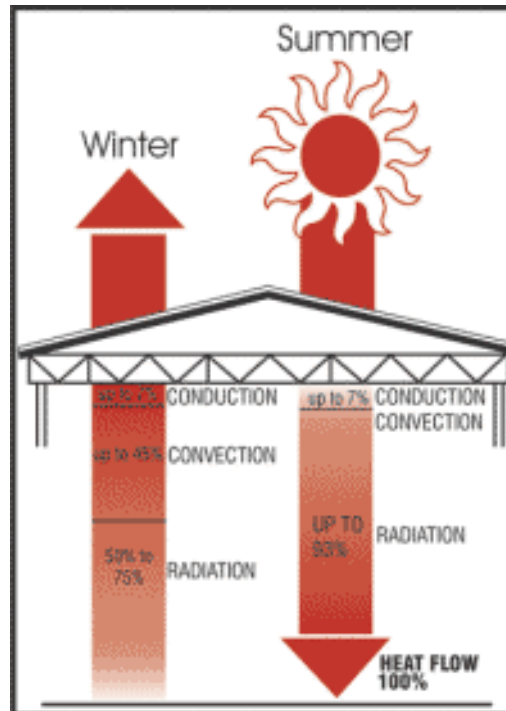
The same material that goes into making SuperR™ kept the NASA astronauts from losing their body heat in the intense atmospheric conditions in space. The Space Shuttle's outer heat tiles and many other components contain radiant barrier to protect against heat and cold. This same space age technology has been incorporated into our SuperR™ line of insulation products, giving you the most up-to-date technology and per-

SuperR™ is used as insulation against radiant heat transfer and can be used to its greatest advantage in instances where radiation is the predominant means of heat transfer. It is the bright aluminum surface of all SuperR™ products that gives it its insulating properties. This occurs in two ways:

- SuperR™ is an excellent reflector of all long wave radiant heat that strikes it—reflecting up to 97% of all radiant heat.
- SuperR™ will reradiate only 3% of heat in which it comes in close physical contact, compared with the approximate 90% re-radiation of ordinary building materials at the same temperature.



## Your Radiant Barrier Distributor: United Remodelers (925)819-0971



*Foiling  
the Effects  
Of Heat  
and Cold <sup>SM</sup>*

## Radiant Barrier Common Questions & Answers

*The following are answers to the most commonly asked questions about radiant barrier (RB). We have tried to answer them in the simplest and least technical way.*

### **How does Radiant Barrier (RB) work?**

Radiant Barrier is unlike mass insulation which only slows down or resists heat transfer. RB reflects heat. Heat always moves towards cold according to the laws of Physics. The problem is how to keep the heat out in the Summer and in in the Winter. There are three ways in which heat goes from warm spaces to cold spaces: **CONDUCTION**, which is direct heat flow through solid objects like a wall or ceiling. **CONVECTION**, which is heat movement through air, occurring when air is warmed. The warm air expands, becoming less dense and rises. **RADIATION**, which is the movement of heat rays across air spaces from one warm object to another cooler object. The heat we feel from a wood stove or a quartz space heater is radiant heat. **ALL OBJECTS AND BODIES GIVE OFF RADIANT HEAT!**

*Foiling the Effects of Heat  
and Cold*

### ***What is the “R” Value of RB?***

The “R” value depends on the number and size of the airspaces surrounding the RB and on the direction of the heat flow. Since RB is usually installed on top of the existing mass insulation, it’s R-Value is a moot point. It is RB’s ability to reflect heat that makes it an energy saver.

### ***How does RB keep me warmer in the winter?***

Just like wrapping a potato in aluminum foil keeps a potato warm longer by holding the heat in, covering your attic insulation with RB holds the heat in your home. Another analogy would be that RB in the winter works like a space blanket, which although very thin and lightweight, holds your body heat in. A thin space blanket can keep you warmer than several heavy blankets.

### ***How does RB keep heat out in the summer?***

Just like a space suit, RB reflects the sun’s heat before it can warm up the insulation in your attic. When the insulation stays cooler, your home will stay cooler. It helps to understand how RB will work for you if you think of other things that work the same way; ASTRONAUTS’ SPACE SUITS—keep body heat in and reflect the sun’s heat away. THERMOS BOTTLES—keep hot things hot and cold things cold. They are almost perfect insulators. The tight seal and air space prohibits heat transfer by conduction and convection. The reflective surfaces inhibit radiation heat transfer.

### ***What if RB Collects Dust over a period of time? Will it still work?***

Yes, over time there can and will be some dust accumulation on the topside of the foil. Studies have shown that after a significant amount of dust accumulation, there is little effect on the reflectivity of the foil.

### ***Won’t my roof get hotter when I have RB in my attic?***

No, RB has been used extensively in the south, showing no difference in roof temperatures, as confirmed by field tests.

### ***Do I have to take my old insulation out to put RB in?***

No, RB actually makes your existing insulation more effective.

### ***Where is RB installed?***

RB can be laid over your existing insulation, or stapled to the underside of your rafters or crawl space. Consult your local RB dealer for your best application.

### ***What about foil faced fiber glass? Isn’t it just as good a RB?***

No. The foil on the fiberglass is in direct contact with the attic floor. Aluminum foil becomes more conductive when in contact with a solid surface. The air space facing the foil is of primary importance.

### ***Why couldn’t I just put plain kitchen foil in my attic?***

You could, but kitchen foil would not be nearly as effective as RB as it is only 22% aluminum, with other alloys and minerals that will cause it to break down over time. The RB is 99.5% pure aluminum, so is much more reflective than foil and does not break down over time. Also, the RB contains small perforations so it breathes and doesn’t cause condensation.

### ***I already have plenty of insulation. Do I really need RB?***

Absolutely! Regardless of how much insulation you have in your attic, RB will save on your heating and cooling expense. The Environmental Protection Agency (EPA) reports a national average of 19% annual saving on heating and cooling costs when RB is added to the insulation envelope.

### ***Has RB been tested by a qualified independent laboratory or Government Agency?***

All SuperR™ products have been awarded the U.S. Department of Energy’s EnergyStar rating for energy saving products. Additional tests have been conducted at The Florida Solar Energy Center at Cape Canaveral. Their results indicate that Radiant Barriers provide significant resistance to heat transfer. Other tests at Oak Ridge Laboratories in Tennessee, University of Mississippi, Northeastern Illinois University, and Texas A&M University all support these findings.