



Hi-Perm Version

Fi-Foil Silver Shield™ is a multi-layer radiant barrier. The inside layer is a 1.4 ml metalized PVC. The outer layer is .000285" aluminum foil laminated with a fire retardant adhesive to 30 lb. natural kraft, and is reinforced with a tri-directional fiberglass and polyester scrim. The layers expand when installed to form a reflective air space. The product is perforated for water vapor transmission through the layers.

How Do Radiant Barriers Work

In a home without a radiant barrier at the roof line, your roof radiates solar-generated heat which elevates attic temperatures upward to 150 degrees or higher. These higher temperatures will increase the heat gain in air conditioning ducts and reduce the performance of mass insulation (the R-values of mass insulation are determined at 75 degree F—higher temperatures lowers the R-value). In addition, the extreme temperatures will saturate the building materials in the attic. This stored heat acts as a heat sink and will continue to transfer heat into the living area of your home even after the sun has set, making air conditioner run longer and consume more electricity. A radiant barrier stops 97% of radiant heat transfer which improves the performance of insulating material and lowers attic temperatures as much as 30 degrees F. A cooler attic will transfer less heat into air conditioner ducts. Radiant barriers also expand the use of space in your home like garages, workrooms, porches, etc. Radiant barriers lowers both cooling and heating costs, reducing energy expenditures throughout the year.

Radiant Barrier System (RBS) is a building construction consisting of a low emittance (normally 0.1 or less) surface (usually aluminum foil) bounded by an open air space. RBS is used for the sole purpose of limiting heat transfer by radiation and is not specifically intended to reduce heat transfer by convection or conduction.

Table of Emittances

E-Values (the lower the better)

Aluminum Foil	03-.05
Common building materials, including wood, masonry, and standard mass insulation	82-.90

Effective Air Space Emittance

is the radiation heat transfer property "E" of an air space determined by the emissivity of the surfaces bounding that air space.

Emissivity is the ratio of the total radiant flux emitted by a body to that emitted by an ideal black body at the same tempera-



Product Information

Furring/Stud Spacing	16"O.C.	24"O.C.	30"O.C.
Width Expanded	17.5"	25.5"	31.5"
Diameter	8"	10"	6"
Lineal Footage	375'	250'	100'
Coverage	500 sq. ft.	500 sq. ft.	250 sq.ft.
Weight	26 lbs.	22 lbs.	10 lbs.

Other Documents for Silver Shield™ Radiant Barrier

- Radiant Barrier Application Sheet
- Radiant Barrier Installation Sheet
- Material Safety Data Sheets
- CSI Specifications Sheet

Test Data

ASTM E-96 - Water Vapor Permeance Hi-Perm	5.00
ASTM E-84 - Flammability	
Flame Spread Rating	0
Smoke Developed Rating	0
National Fire Protection Assoc.	Class A
ASTM C-1371 - Thermal Emittance	
1st layer MET PVC Metal Side	0.04
2nd layer foil laminate	0.03
ASTM D-3310 - Corrosivity, 5 days	No Change
Adhesive Performance	
Bleeding	None
Delamination	None
Pliability	None
ASTM D-2261 - Tongue Tear Test	MD 1.77 CD 2.32
ASTM C-1338 - Mold & Mildew	Pass

Compliance and Approvals



Meets: ASTM C-1313
State of California Bureau of Home Furnishings and Thermal Insulation License #TD1390 Registry #CA-T390



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