



## Specification Sheet

# Radiant Barrier Insulation

Fi-Foil Radiant Shield is a sheet radiant barrier comprised of metalized aluminum deposited on both sides of a layer of woven polyethylene. This heavy duty radiant barrier provides superior tear resistance for radiant barrier applications.

### How Radiant Barriers Work

In a home without a radiant barrier at the roof line, your roof radiates solar-generated heat into the attic space 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 degrees F - higher temperatures lower 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 a home even after the sun has set, making the air conditioner run longer and consume more electricity. A radiant barrier stops 95% of radiant heat transfer which improves the performance of insulating materials and lowers attic temperatures as much as 30 degrees F. A cooler attic will transfer less heat into air conditioning ducts. Radiant barriers also expand the use of space in your home like garages, workrooms, porches, etc. Radiant barriers lower both cooling and heating costs, reducing energy expenditures throughout the year.

### Radiant Barrier System (RBS)

A Radiant Barrier System (RBS) consists of a low emittance surface (normally 0.1 or less) bounded by an open air space. An RBS primarily reduces heat transfer by radiation.

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

### Product Information

Width of roll	25.5"	48"	51"
Lineal Footage	236'	125'	118'
Coverage (sq.ft.)	500	500	500
Weight (lbs.)	7	14	14

### Compliance and Approvals

- Meets: ASTM C 1313
- Compliance with the following code
  - 2018, 2015, 2012 International Building Code (IBC)
  - 2018, 2015, 2012 International Residential Code (IRC)
  - 2018, 2015, 2012 International Energy Conservation Code (IECC)
  - 2020, 2017 Florida Building Code (FBC)
  - 2020, 2017 Florida Residential Code (FRC)
  - 2020, 2017 Florida Energy Conservation Code (FECC)
- Evaluated in accordance with
  - ICC-ES AC 220 - Acceptance Criteria for Sheet Radiant Barriers, approved September 2010
- State of California Bureau of Home Furnishings and Thermal Insulation License #T1390, Registry #CA -T390 FL

### 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

### Test Data

Product Version	<u>Perforated</u>
ASTM E 96 Water Vapor Permeance, Class III	> 1.0 < 10.0
ASTM E 84-94 Flammability	Class 1 / Class A
Flame Spread Rating	<25
Smoke Developed Rating	<50
National Fire Protection Association Rating	Class 1 / Class A
ASTM C 1371 Emissivity.....	0.05
ASTM C 3903 Reflectivity.....	0.95
ASTM C 1338 Mold & Mildew.....	Does Not Promote Growth
ASTM D 4533 Tear Strength	WARP.....46.8
	WEFT.....27.4
ASTM C 1313 Pliability.....	Pass
Bleeding / Delamination.....	None
ASTM D 3310 Corrosivity.....	Pass