



# Homestead 8570 Floor Protection

## *How to meet the requirements*

*\*Noncombustible:* A material that, in the form in which it is used, and under the conditions anticipated, will not ignite, burn, support combustion or release flammable vapors when subjected to fire or heat.....

*\*Floor protector:* Noncombustible surfacing applied to the floor area underneath and extending in front, to the sides and to the rear of a heating appliance.

*\*Hearth extension:* Noncombustible surfacing applied to the floor area extending in front of and at the sides of the hearth opening of a fireplace or fireplace insert.

### \*Excerpts from UL 1618

The Homestead, when installed with 4” legs, must be installed on a *noncombustible floor protector*, with an “R” value equal or greater than 6.6.

When installed with 6” legs, and the supplied heat shield, a hearth pad listed to UL 1618 is required or a composite (homemade) floor protector with an “R” value equal to or greater than 2.5.

The following is a compilation of “R” values, which may be added together to gain the necessary requirements to install the Homestead:

Non-Combustible Material	Thickness	"R" value
<sup>1</sup> Gypsum or plaster board	1/2"	0.45
<sup>1</sup> Wallboard, Wonderboard or Durock	1/2"	0.2
<sup>1</sup> Ceramic board i.e. Fiberfrax or Micor	1/2"	1.1
<sup>1</sup> Nominal solid clay brick	1"	0.2
<sup>1</sup> Ceramic wall or floor tile	1/4"	0.01
<sup>2</sup> Mineral wool insulation	1"	3.12
<sup>2</sup> Cement mortar	1"	0.2
<sup>2</sup> <b>Horizontal still air</b>	<b>1/8"</b>	<b>0.92</b>

<sup>1</sup> According to Intertek Testing Services, Inc.

<sup>2</sup> According to ASHRAE Handbook of Fundamentals 1977

\*1/4” **Horizontal still air** does not equal  $0.92R + 0.92R = 1.84R$ .

\*1/8” of **Horizontal still air** must have a noncombustible material separation between each other, in order to add together. For instance: If you have 1/8” air space, you need to add i.e. 1/2” **Ceramic Board** to create the next 1/8” air gap. This will get your “R” value to  $(0.92R) + (1.1R) + (0.92) = 2.94$

 Example Target “R” value = 2.5 (use the chart above to correspond with this example)

To get to 2.5 you may do the following:

A) Over a wood floor, place 1/2” of **CERAMIC BOARD** (1.1R) + 1/8” of **HORIZONTAL STILL AIR** (0.92R) + of 4” of **SOLID CLAY BRICK** (0.8R) = 2.82R. This is > 2.5R, so this is acceptable.

Or

B) Over a wood floor, place 1/2” of **MINERAL WOOL INSULATION** (1.56R) + 1/8” of **HORIZONTAL STILL AIR** (0.92R) + 1” of **CEMENT MORTAR** (0.2R) = 2.68R. This is also >2.5R, so this is acceptable.