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Foundation insulation is insulation added to the foundation walls (conditioned crawlspace or conditioned basement) or slab edge to reduce the amount of heat transferred through it. Most houses do not have foundation insulation. If you don't know whether the house has it, answer "no."

There are 2 insulation entries under the Foundation heading. Both must have a value entered for the tool to run - enter R-0 for the field if there is no insulation. For example a typical basement will often have no insulation on the walls and no insulation in the floor cavities above, so you should enter R-0 for the floor insulation and R-0 for the foundation insulation.

If there are different R-values in multiple foundation spaces, perform a UA calculation (you can use the **Home Energy Score Assessor Calculator*** for this) to determine the appropriate R-value to enter:

- $(A_1/R_1 + A_2/R_2)/(A_1+A_2) = U$
- $1/U = R$
- Where: {A is area (ft^2), R is the nominal R-value (must be >=1), U is U-value}

De-rate the insulation R-value for installation quality. (see diagrams and table for de-rate factors)

R-Value is a measure of the resistance of insulating material to heat transfer. The higher the R-value number, the more effective the insulation. You can use the inches guidelines to estimate the R-value of the attic floor insulation for fiberglass and similar insulations, or calculate the R-value by identifying the

insulation type in the table below and multiplying the number of inches of insulation present by the R-value per inch.
*The **Home Energy Score Assessor Calculator is available to Assessors and is located on the Partner Portal.**

Insulation Tables					
Insulation Type	**R-value**		**Good**	**Fair**	**Poor**
Loose-Fill		Measured Batt Thickness	Effective R-value (2.5 per inch)	Effective R-value (1.8 per inch)	Effective R-value (0.7 per inch)
Cellulose	3.4	0	0	0	0
Fiberglass	2.5	1	3	2	1
Rockwool	3.1	2	5	4	1.5
Perlite	2.5	3	8	5	2
Vermiculite	2.2	4	10	7	3
Rigid		5	13	9	3.5
Polystyrene large curd molded	4	6	15	11	4
Polystyrene small curd extruded	5	7	18	13	5
Polyurethane	6	8	20	14	5.5

Polyisocyanurate	6	9	23	16	6
Spray Foam-in-place		10	25	18	7
Urethane	6	11	28	20	8
		12	30	22	8.5
Fiberglass Batt (thickness)					
3 1/2 in	13	*Derived from ASHRAE document "Heat Transmission Coefficients for Walls & Roofs"			
6 in	19				
10 in	30	apply de-rates to batt insulation - see graphics below			
12 in	38				

Insulation Installation Quality

Good Fair Poor