

Use the following chart to determine effective R-values for batt insulation installed in attics:

Effective R-values for Batt Insulation*

	“Good”	“Fair”	“Poor”
Measured Batt Thickness (inches)	Effective R-value (2.5 per inch)	Effective R-value (1.8 per inch)	Effective R-value (0.7 per inch)
0	0	0	0
1	3	2	1
2	5	4	1.5
3	8	5	2
4	10	7	3
5	13	9	3.5
6	15	11	4
7	18	13	5
8	20	14	5.5
9	23	16	6
10	25	18	7
11	28	20	8
12	30	22	8.5

1. Measure the insulation thickness.
2. Determine the condition of the installation using the following criteria:
 - ✓ Good – No gaps or other imperfections
 - ✓ Fair – Gaps over 2.5% of the insulated area. (This equals 3/8 inch space along a 14.5 inch batt.)
 - ✓ Poor – Gaps over 5% of the insulated area. (This equals 3/4 inch space along a 14.5 inch batt.)
3. Look up the effective R-value of the installed insulation using the condition and measured inches.

**Derived from ASHRAE document “Heat Transmission Coefficients for Walls, Roofs, Ceilings, and Floors” 1996*

Default Values for Windows

Where NFRC numbers are not available, use the following chart to estimate the U-value and Solar Heat Gain Coefficient (SHGC) for windows and glazed areas of doors. If there is not a label etched on the glass identifying the presence of a low-e coating, this can be verified using a spectrally selective metering device. The values shown below are only estimates. They do not account for all possible window configurations and variations due to airspace thickness, insulated frames, mullions, etc. Since U-values can vary greatly depending on the window type (double-hung, casement, fixed) even within the same manufacturer’s model line, it is strongly recommended that NFRC ratings are used whenever the windows are appropriately labeled.