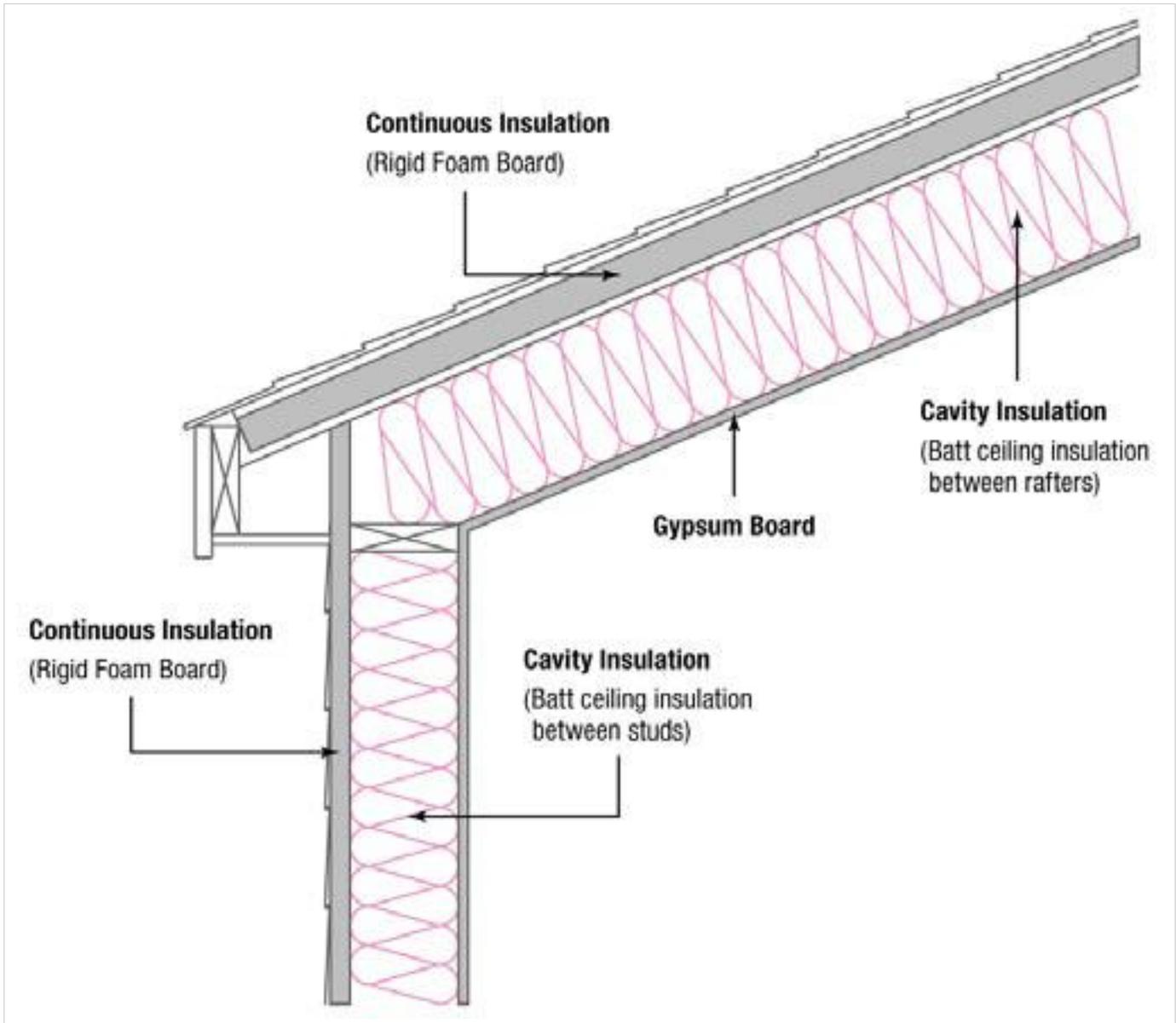




## Cavity and Continuous Insulation in REScheck

### Insulation Terms



#### Continuous Insulation

Insulation that runs continuously over structural members and is free of significant thermal bridging; such as rigid foam insulation above the ceiling deck. It is installed on the interior, exterior, or is integral to any opaque surface of the building envelope.

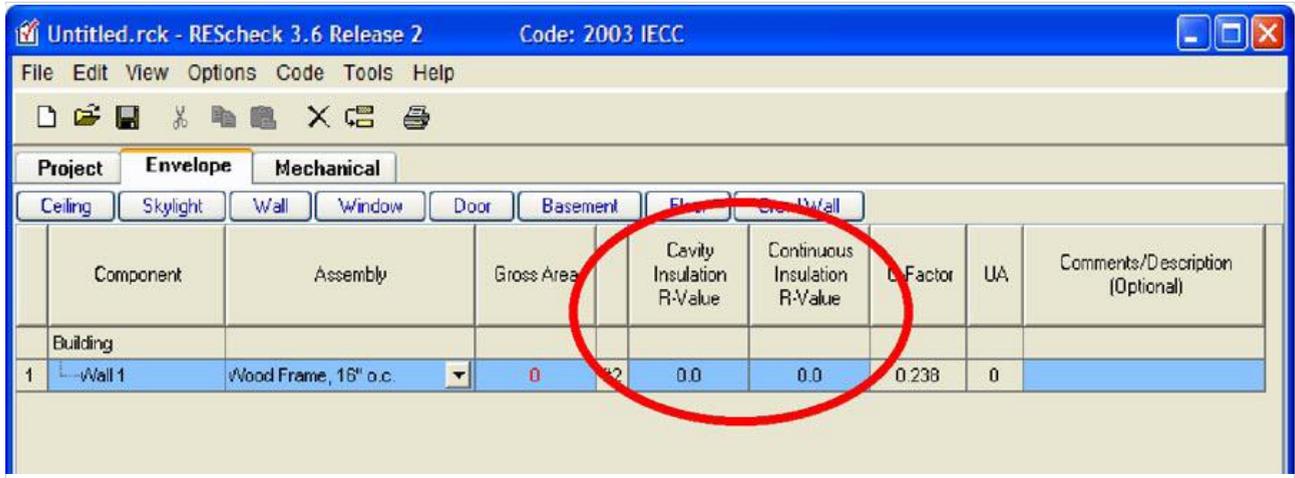
#### Cavity Insulation

Insulation installed between structural members such as wood studs, metal framing, and Z-clips.



Cavity insulation is used within the wood- or metal-framed wall, while rigid continuous insulation (c.i.) is placed on the exterior side of the framing.

Alternative combinations of cavity insulations and sheathings in thicker walls can be used, provided the total wall assembly has a U-factor that is less than or equal to the appropriate climate zone construction requirements.



## Cavity Insulation Calculation in REScheck

Insulation should be installed to fill the entire cavity. REScheck uses nominal insulation R-values. The program does not calculate for compression. For example, if R-19 is entered as the cavity insulation R-value, it assumes the full R-19 in REScheck. Walls with insulation R-values equal to or less than R-15 are modeled in REScheck as having 2x4 studs at either 16" or 24" O.C. (on center) and cavity wall insulation R-values greater than R-15 are modeled as 2x6 studs at either 16" or 24" O.C.

## Continuous Insulation Calculation/Insulated Sheathing

The assemblies listed in REScheck already have a default value added for standard sheathing (depending on the assembly component). If no sheathing is indicated by the user, the sheathing is assumed to be plywood with an R-value of 0.83. If insulated sheathing is used, only 80% of the net wall is assumed to be covered by the insulated sheathing. The other 20% is assumed to be covered with plywood.

## REScheck Quick Tip

**Cavity R-Value** - Enter the R-value of any insulation to be installed in the cavities between above-grade wall structural members. The insulating values of other parts of the building assembly (e.g., gypsum board and air films) are accounted for by the program and should not be included.

**Continuous R-Value** - Enter the R-value of any continuous insulation in the above-grade wall. Continuous insulation is continuous over framing members or furring strips and is free of significant thermal bridging. The R-values of other parts of the building assembly (e.g., gypsum board and air films) are accounted for by the program and should not be entered. Insulated sheathing installed on the exterior of above-grade walls is an example of continuous insulation. For structural insulated panels and insulated concrete forms, enter the manufacturer-reported R-value for the entire assembly.

For additional information on REScheck calculations, refer to the [Methodology for Developing the REScheck Software through Version 4.4](#).

## Other Related information



- [Insulation Overview](#)
- [REScheck Webcast Questions - Walls](#)
- [How Do I Enter Cavity and Continuous Insulation for Basement Walls in REScheck?](#)
- [Insulation Options](#)