

The Shortcomings of Conventional Stick Framing



Typical stud wall designs place cavity insulation between the studs. This results in an uneven thermal distribution over the wall. The highly conductive studs act as thermal short circuits, where heat moves rapidly around the cavity insulation, reducing the system's thermal performance. These thermal short circuits can reduce the R-value of insulation by more than 50% of its rated value. What's more, adding thicker insulation between the studs will not significantly improve thermal performance, nor will increasing stud size or spacing — making it physically impossible to achieve an R19 stud wall using R-19 mineral fiber insulation by itself.

— The Dow Chemical Company, White Paper