



Comparison of InSoFast Panels and R-13 Fiberglass Wall Assemblies

As you will see in the charts below, InSoFast panels with a total wall assembly R-Value of 11.08 will outperform the traditional 2x4 framed wall using R-13 fiberglass insulation.

Oak Ridge National Laboratories, an independent testing facility, did a study on the actual performance of “Perfectly Installed” and real world “Typically Installed” fiberglass insulation. Their findings show that fiberglass insulated walls can fall short of their stated R-13 value by 11% to 28%.

Using the “Typically Installed” performance of fiberglass, InSoFast performs 8.4% better than the R-10.22 of the traditional wall assembly.

Component	R-Value of “Typically Installed” Fiberglass Assembly—Less 28%		InSoFast Wall Assembly
	Studs Only	Cavity Only	
Exterior Air Film	0.17	0.17	0.17
Concrete Foundation	1.28	1.28	1.28
3-1/2” Fiberglass Batt R-13	---	9.36 *	---
3-1/2” Stud	4.38	---	---
InSoFast Panel	---	---	8.50
½” Drywall	0.45	0.45	0.45
Interior Air Film	0.68	0.68	0.68
Percent for 16” O.C. plus Studs	15%	85%	---
Total Wall Component R-Values	6.96	11.94	11.08
Wall Component U-Values	0.176	0.084	0.09
Total Wall Assembly R-Value		10.22	11.08

* Fiberglass Batts-Labeled vs. Installed Performance—Oak Ridge National Laboratory research shows that “perfectly installed” batts lose 11% of their labeled R-Value, and that “commonly installed” fiberglass batts lose 28% of their labeled R-value. [See documentation.](#)

R-Value Calculation: $Assembly\ R-Value = 1 / (Assembly\ U-Value) = 1 / (u-Studs\ x\ \% + U-Cavity\ x\ \%)$
[R-Value List for Building Materials](#)

InSoFast[®] vs R-13 Fiberglass Insulation



Patent Pending

According to the Department of Energy's [Building America Report](#), an un-insulated basement can account for up to one third of the heat loss of a residential structure. The DOE report states that by installing R-5 insulation (Total Assembly R-Value 7.13) on the interior of a basement wall, the heat loss will be cut by 70%. Based on this report, installing InSoFast with an R-Value of 8.5 (Total Assembly R-Value 11.08) the heat loss will be reduced by 81%.

InSoFast, LLC
7255 Commerce Circle E.
Fridley, MN 55432