



PROVEN LIFETIME PERFORMANCE



FIBER GLASS AND MINERAL WOOL INSULATION ARE KEY TO CREATING THE HIGHEST PERFORMING BUILDS POSSIBLE.

They are innovated through advanced building science to give your buildings one of the best combinations of thermal, acoustical, moisture and fire protection available in the industry.

Thermal Performance Today, and for the Life of the Building

Fiber glass and mineral wool batts simply don't settle, and loose fill options only settle a negligible amount – exhibiting virtually no signs of R-Value loss over time.¹ On the other hand, cellulose loose-fill insulation can settle up to 20%² and requires compensation for settling during installation.³ Likewise, spray foam insulation may experience shrinkage over time, losing R-Value and potentially resulting in an ongoing degradation of thermal performance.⁴

0%
**R-VALUE LOSS
OR SETTLING WITH BATTS***
PERFORMS FOR THE LIFE OF THE BUILDING

Achieve Near-Zero Air Infiltration

According to the NAHB Research Center and other independent tests, when fiber glass and mineral wool are paired with standard air sealing practices, including taped house wrap or caulk, air infiltration is effectively reduced to near zero.^{5,6,7,8,9,10}

“With the house wrap properly installed and taped, the differences between insulation types are very small.”

— “Air Infiltration of Wood Frame Walls,”
NAHB Research Center

An air infiltration study by the NAHB Research Center reveals that the biggest improvements in air infiltration resistance for the tested wall configuration resulted from using correctly installed house wrap, rendering the air sealing differences between insulation types relatively insignificant.



Rock and Glass Don't Burn, and That Can Save Lives

In case of fire, the choice of insulation material can vitally influence the probability of casualties, material or environmental damage. Unfaced fiber glass and mineral wool are naturally noncombustible and outperform other standard insulating materials – all without using harsh chemical fire retardants.

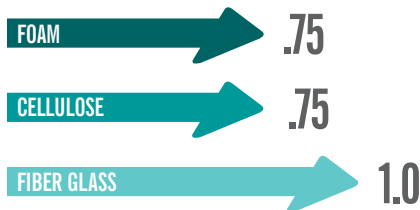
Mineral wool is an excellent choice for applications with especially stringent fire and smoke rating requirements, meeting NFPA 220, ASTM E 136 standards. It serves as a fire barrier that actually delays the spread of a fire, providing vital extra minutes for firefighters to save people and property. Combustible insulation, on the other hand, can fuel the fire and cause it to spread.

Superior Acoustics

Fiber glass absorbs up to 25% more sound than spray foam and cellulose.¹¹

NRC Ratings

Comparing Spray Foam, Cellulose and Fiber Glass



2150°F

FIBER GLASS & MINERAL WOOL ARE NATURALLY NONCOMBUSTIBLE²

Material	Fire Resistance
CELLULOSE	COMBUSTS AT 500°F
SPRAY FOAM	COMBUSTS AT 1100°F
FIBER GLASS	MELTS AT 1300°F
MINERAL WOOL	MELTS AT 2150°F

Get the Facts for a Stronger Business

Discover more insulation knowledge at InsulationInstitute.org/Proven



¹ NAHB Research Center, Inc., NAIMA Loose-Fill Settling Study, Study of the Thickness Settling of Dry-Applied Attic Open Blow Mineral Fiber Loose-Fill Insulations in Site-Built Test Home Attics, Fourth Year Report, August 2008

² Bengt Svennerstedt, "Field Data on Settling in Loose-Fill Thermal Insulation," Insulation Materials, Testing and Application (ASTM: Philadelphia, PA, 1990), pp. 231, 236

³ 16 C.F.R. 460.12(b)(2)

⁴ Foams are not UV stable and can be biodegraded by sunlight. Richard T. Bynum, Jr., Insulation Handbook (New York: McGraw-Hill, 2001), p. 195. Elastomeric coating is required to stop the foam from degrading. Degradation compromises the thermal performance. Richard T. Bynum, Jr., Insulation Handbook (New York: McGraw-Hill, 2001), p. 195. Foams tend to shrink over time; Richard T. Bynum, Jr., Insulation Handbook (New York: McGraw-Hill, 2001), p. 199. Improper equipment use can cause shrinkage; Richard T. Bynum, Jr., Insulation Handbook (New York: McGraw-Hill, 2001), p. 200. Maximum shrinkage is 1/8 inch in a wall cavity; Richard T. Bynum, Jr., Insulation Handbook (New York: McGraw-Hill, 2001), p. 200

⁵ "Achieving Grade I Insulation With Fiber Glass Batts," prepared by Advanced Energy for Owens Corning. www.owenscorning.com/literature/pdfs/GradeOneWithFiberGlassBatts.pdf

⁶ "Air Infiltration of Wood Frame Walls," NAHB Research Center, May 2009

⁷ "Field Demonstration of Alternative Wall Insulation Products," prepared for U.S. Environmental Protection Agency by NAHB Research Center, Inc., November 1997

⁸ "A Field Study of the Effect of Insulation Types on the Air Tightness of Houses," G.K. Yuill, Ph.D., Pennsylvania State University Department of Architectural Engineering, 1996

⁹ Research and Development Project, "Maple Acres," Union Electric, St. Louis, Missouri. William Conroy, division marketing supervisor, 1995

¹⁰ Johns Manville, Technical Bulletin FGBI 43, April 2005

¹¹ Complete wall system including ½" particle board siding, 1/8" pressed cardboard sheathing and ½" gypsum board. http://www.oklahomafoam.com/foam_insulation_faqs.htm; Johns Manville, "Sound Control Frequently Asked Questions," January 2003

¹² Cellulose is naturally flammable. Cellulose insulation manufacturers must apply 20 to 23 percent, by weight, of fire retardants to reduce flammability. Sarfraz A. Siddiqui, "A Handbook on Cellulose Insulation (Malabar, Florida: Robert E. Krieger Publishing Company), 1989, pages 27, 57-61, 63-74