



INNOVATIONS FOR LIVING™

R-21 High Density FIBERGLAS® Insulation for 2x6 Exterior Walls

Product Data Sheet

R-21 High Density FIBERGLAS Insulation Unfaced and Kraft-faced

Excellent Thermal Performance

Owens Corning R-21 high density PINK FIBERGLAS insulation is specifically engineered to solve the efficiency problems of exterior 2x6 walls. "High density" means more fibers per square inch. It delivers a higher R-value per square inch in less space than standard insulation products.

R-21 high density insulation is available in batts, unfaced and faced with a kraft vapor retarder.

Long-Term Performance

R-21 high density insulation will not hold water, thereby resisting the permanent loss of R-value. When properly installed, R-21 high density insulation will not settle or deteriorate, ensuring that the insulating value of the insulation is maintained for the life of the product.

Maximum R-Value at Lower Costs

R-21 high density insulation is designed to eliminate R-value loss caused by compressing standard R-19 FIBERGLAS insulation into 2x6 exterior walls. 5½" thick R-21 high density insulation delivers 19% more R-value than compressed 6¼" R-19 fiber glass insulation.

Technical Information

- The kraft facing on this insulation will burn and must not be left exposed. Install facing in substantial contact with the finish material. Protect from open flame or other heat source.
- Owens Corning recommends that a vapor retarder should be used in most climates.
- In climates requiring winter heating, the vapor retarder should be placed toward the warm-in-winter side. (In humid climates, like the Gulf Coast, follow local building practices for vapor retarder placement.)

- In all applications using a vapor retarder, maintaining the facing integrity is important for effective moisture/humidity control. Repair any punctures or tears in the facing by taping.

Read This Before You Buy

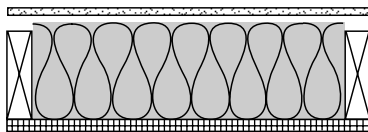
What you should know about R-Values

The chart shows the R-value of this insulation. R means resistance to heat flow. The higher the R-value, the greater the insulating power. Compare insulation R-values before you buy.

There are other factors to consider. The amount of insulation you need depends mainly on the climate, the type and size of your home, and your fuel use patterns and family size. If you buy too much insulation, it will cost you more than you'll save on fuel.

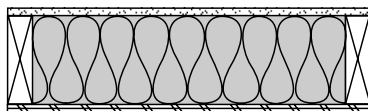
To get the marked R-value, it is essential that this insulation be installed properly.

6¼", R-19 Insulation Batts



Standard R-19 batts compressed into a 5½" cavity provide only R-18 thermal performance for the wall assembly.

5½", R-21 Insulation Batts



New R-21 batts fit perfectly and when properly installed deliver thermal performance in excess of that recommended by the Department of Energy.

Product Data

R-21 High Density

	Width	Length	Thickness	R-Value ¹
Wood Frame Construction	15" (381mm) 23" (584mm)	93" (2,362mm)	5½" (139mm)	21.0

¹The higher the R-value, the greater the insulating power. Ask your Owens Corning representative for the fact sheet on R-values.

Available Vapor Retarder Facings

Max. by Volume

Kraft

1

Water Absorption

Max. by Volume

Less than 0.05%

Dimensional Stability

Linear Shrinkage

Less than 0.1%



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Application

- R-21 high density insulation is intended to be friction-fit between exterior wall wood studs.
- Friction-fit unfaced insulation between studs after cover material has been installed on one side of the cavity.
- Use wire or metal straps to hold insulation in place in applications without a cover material.
- When faced insulation is used, staple attachment flanges to face or side of stud every 8 to 12 inches to prevent gaps along the edge of the vapor retarder.
- Owens Corning does not require that faced insulation be stapled.

Applicable Standards

Unfaced R-21 high density insulation complies with ASTM C 665, Type I and ASTM E 136. Kraft-faced R-21 high density insulation complies with ASTM C 665, Type II, Class C. Federal Specification HH-I-52IF has been cancelled and is replaced by ASTM C 665.

The thermal resistance value for R-21 high density insulation was tested in accordance with ASTM C 518; R-value for insulation only.

The surface burning characteristics of R-21 high density insulation were derived from products tested in accordance with ASTM E 84. This standard is used solely to measure and describe properties of products in response to heat

Surface Burning Characteristics/Building Code Construction Classifications

Products	Flame Spread	Smoke Developed	ICBO	BOCAI	SBCCI	ICC
Unfaced	<25	<50	All Types	All Types	All Types	All Types
Kraft-faced	N/R	N/R	III, IV,V	3,4,5	III, V,VI	III, IV,V

Thermal batt insulation complies with Uniform Building Code (ICBO), National Building Code (BOCAI), Standard Building Code (SBCCI), and International Building Code (ICC) model code requirements for building construction types listed above.

The kraft facing on thermal batt insulation will burn and must not be left exposed. Install facing in substantial contact with the finish material. Protect from open flame or other heat source.

and flame under controlled laboratory conditions. These numerical ratings are not intended to reflect hazards presented by this or any other material under actual fire conditions. Values are reported to the nearest five rating.

The vapor retarder permeance of the kraft facing on R-21 high density insulation was developed from tests conducted in accordance with ASTM E 96, desiccant method.

Fiber Glass and Mold:

As manufactured, fiber glass insulation is resistant to mold growth. However, mold growth can occur on building materials, including insulation, when it becomes contaminated with organic material and when water is present. To avoid mold growth on fiber glass insulation, remove any water that has accumulated and correct or repair the source of that water as soon as possible. Insulation that has become wet should be inspected for evidence

of residual moisture and contamination, and any insulation that is contaminated should be promptly removed and replaced.

Caution: Fiber glass insulation may cause temporary irritation to skin, eyes and respiratory tract. Wear long-sleeved, loose fitting clothing, gloves and safety glasses when handling and applying material. Wash with soap and warm water after handling. Wash work clothes separately and wipe out washer.



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