

# EcoFill® Wx Blowing Wool Insulation

Submittal Date \_\_\_\_\_



## DESCRIPTION

Knauf Insulation EcoFill Wx blowing wool insulation is an unbonded, virgin fibrous glass blowing insulation having a high degree of post-consumer recycled content, designed for weatherizing and retrofitting existing housing.

## APPLICATION

Knauf Insulation EcoFill Wx blowing wool insulation is used to dense-pack sidewalls using the drill and fill technique common in retrofitting homes or in home weatherization activities. EcoFill Wx blowing wool insulation is also excellent for doing open blows in attics. This means that only one product is needed to complete an insulation retrofit/weatherization project.

## PRODUCT FEATURES

### Excellent Thermal Properties

- Fills all gaps and voids in wall cavities, creating a thermal barrier against outside air and better temperature control
- Greater resistance to air infiltration than cellulosic materials
- Resists heat flow with an R-value of R-15 in 2 x 4 construction and R-23 in 2 x 6 construction
- Absolutely will not settle in walls
- Will not change from its intended R-value over its lifetime

### Saves Warehouse and Truck Space

- Requires about one-half of the warehouse and truck space of competing cellulosic products

### Better Coverage than Cellulose

- More than 2x the coverage per bag

### Sustainable

- Contains a high degree of recycled glass verified every six months by UL Environment

### Improves Crew Productivity

- Installers spend less time handling bags. In a 2,000 square foot home, about 46 bags of EcoFill Wx blowing wool insulation are required, compared to 145 bags of cellulosic material
- Installs cleaner than cellulose, virtually dust-free
- Blows clean and smooth and does not require stabilizing

## Strong Poly Bag Packaging

- Packaged in a very strong poly bag that prevents bag breakage and jobsite spillage. The bags stack well and have a coefficient of friction sufficient to reduce slippage.

## Non-combustible

- Glass mineral wool is naturally non-combustible and remains so for the life of the product. Unlike cellulose, EcoFill Wx blowing wool insulation requires no additional fire-retardant chemical treatments. Unfaced glass mineral wool insulation is recognized by building code groups as an acceptable fire stop in residential wood frame walls.

## Air Infiltration Resistance

- When tested against three cellulose products using ASTM C522, EcoFill Wx blowing wool insulation showed 20 to 100% better air flow resistance than three leading brands. (See table)

## Noise Reduction

- Improves Sound Transmission Class (STC) ratings by 4 to 10 points, with a 3 point STC change being a noticeable improvement

## INDOOR AIR QUALITY

- UL Environment
  - GREENGUARD
  - GREENGUARD Gold

## SPECIFICATION COMPLIANCE

- ASTM C764; Type I
- HH-1030B; Class B Certified
- Meets the Quality Standards of the State of California

## THERMAL PERFORMANCE

The stated thermal performance of EcoFill Wx blowing wool insulation requires installation in accordance with the manufacturer's instructions. Failure to install the material properly will impact the performance of this product. This product must be installed according to the coverage charts provided.

## EQUIPMENT REQUIRED

To achieve labeled R-value, this product must be applied with a pneumatic blowing machine and a corrugated hose with a minimum ¼" internal corrugation, a minimum length of 150'. Coils in the hose should not be less than 36" in diameter. Acceptable material feed rate is 5–35 lbs./min. The recommended feed rate is 15–35 lbs./min.

## CERTIFICATIONS

- UL Environment
  - GREENGUARD
  - GREENGUARD Gold
- USGBC LEED
- EUCEB
- Energy Star

## GLASS MINERAL WOOL AND MOLD

Glass mineral wool insulation will not sustain mold growth. However, mold can grow on almost any material when it becomes wet and contaminated. Carefully inspect any insulation that has been exposed to water. If it shows any sign of mold it must be discarded. If the material is wet but shows no evidence of mold, it should be dried rapidly and thoroughly.

## NOTES

The chemical and physical properties of Knauf Insulation EcoFill Wx insulation represent typical average values determined in accordance with accepted test methods. The data is subject to normal manufacturing variations. The data is supplied as a technical service and is subject to change without notice. References to numerical flame spread ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Check with your Knauf Insulation Territory Manager to ensure information is current.

Technical Data		
Property (Unit)	Test	Performance
Corrosion	ASTM C764	Pass
Critical Radiant Flux	ASTM E970	Greater than 0.12 W/cm <sup>2</sup>
Combustibility	ASTM E136	No temperature rise above 54° F (30° C)
Water Vapor Sorption (by weight)	ASTM C1104	5% maximum
Mold Growth	ASTM C1338	Pass
Surface Burning Characteristics (flame spread/smoke developed)	ASTM E84, CAN/ULC S102	25/50

### Open Attic Application

R-Value*	Minimum Bags/ 1,000 ft <sup>2</sup>	Maximum Coverage/Bag	Net Minimum Weight/ft <sup>2</sup>	Initial Installed Thickness	Minimum Settled Thickness**
To obtain an insulation resistance of:	Number of bags per 1,000 ft <sup>2</sup> of net area should not be less than:	Contents of this bag should not cover more than:	Weight per ft <sup>2</sup> of installed insulation should not be less than:	Installed insulation should not be less than:	Installed insulation should not be less than:
R-11	5.3	188.4 ft <sup>2</sup>	0.152 lbs.	4"	4"
R-13	6.4	156.6 ft <sup>2</sup>	0.183 lbs.	4¾"	4¾"
R-19	9.4	106.6 ft <sup>2</sup>	0.268 lbs.	6¾"	6¾"
R-22	10.9	91.4 ft <sup>2</sup>	0.313 lbs.	7¾"	7¾"
R-26	13.2	75.9 ft <sup>2</sup>	0.377 lbs.	9½"	9½"
R-30	15.3	65.5 ft <sup>2</sup>	0.437 lbs.	10¾"	10¾"
R-38	19.9	50.2 ft <sup>2</sup>	0.569 lbs.	13"	13"
R-44	23.4	42.7 ft <sup>2</sup>	0.670 lbs.	14¾"	14¾"
R-49	26.3	38.0 ft <sup>2</sup>	0.753 lbs.	16¾"	16¾"
R-60	33.3	30.1 ft <sup>2</sup>	0.952 lbs.	19¾"	19¾"

### Cavity Wall Application - Dense Pack

Framing	Cavity Depth	R-Value*	Density	Bags/ 1,000 ft <sup>2</sup>	Maximum Coverage/Bag	Net Minimum Weight/ft <sup>2</sup>
		To obtain a thermal resistance of:		Number of bags per 1,000 ft <sup>2</sup> of net area should not be less than:		
2" x 4"	3.50"	R-15	2.2 lbs.s./ft <sup>3</sup>	22.4 bags	44.6 ft <sup>2</sup>	0.624 lbs.s.
2" x 6"	5.50"	R-23	2.2 lbs.s./ft <sup>3</sup>	35.3 bags	28.4 ft <sup>2</sup>	1.008 lbs.s.
2" x 8"	7.25"	R-31	2.2 lbs.s./ft <sup>3</sup>	46.5 bags	21.5 ft <sup>2</sup>	1.329 lbs.s.
2" x 10"	9.25"	R-39	2.2 lbs.s./ft <sup>3</sup>	59.3 bags	16.9 ft <sup>2</sup>	1.696 lbs.s.

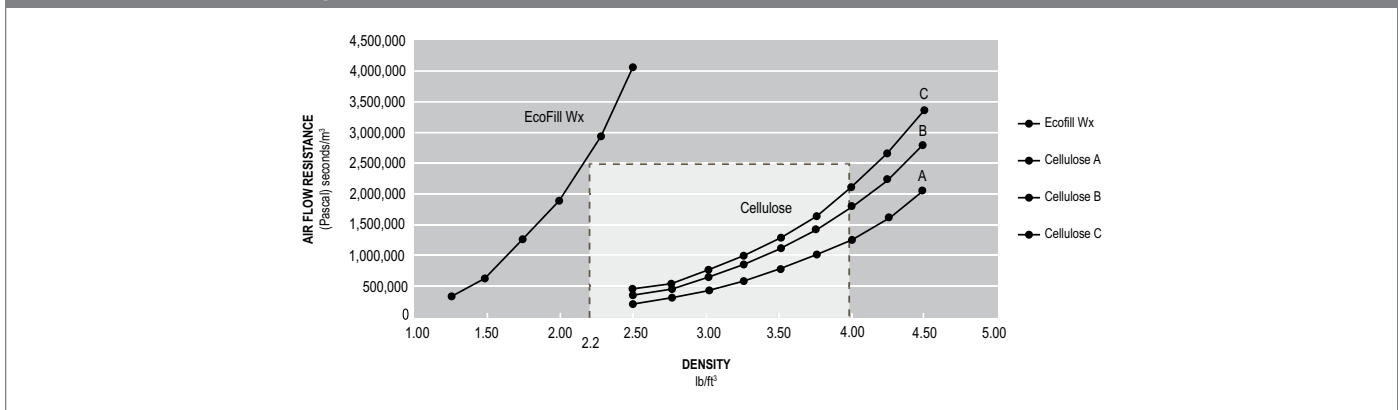
Bag Net Weight - 28.6 lbs., 27.6 lbs. minimum.

Coverage and installation data were determined using a Volu-Matic® II blowing machine in 3rd gear with a 13" gate opening, 2.0 psi air pressure and 150' of 3" diameter internally-corrugated hose. \*\*"R" means resistance to heat flow. The higher the R-value, the greater the insulating power. To get the marked R-value it is essential that this insulation be installed properly. If you do it yourself, get instructions and follow them carefully. Instructions do not come with this package.

\*\*Based on a Third Party 2-year settling study, the predicted settlement over a 20-year period would be 1 percent or less. This amount of settling is thermally insignificant. Therefore, the installed and settled thickness is effectively the same.

Volu-Matic® II is a registered trademark of Unisul.

### Air Flow Resistance vs. Density



This product is covered by one or more U.S. and/or other patents. See patent [www.knaufinsulation.us/patents](http://www.knaufinsulation.us/patents).