



Data Sheet

BI-BWJ-DS 12-15

JET STREAM[®] **ULTRA**

Glass Mineral Wool Blowing Insulation

Knauf Insulation Jet Stream[®] **ULTRA** Glass Mineral Wool Blowing Insulation is an unbonded, virgin fibrous glass blowing insulation designed with optimal thermal properties and excellent coverage and blowing characteristics.

- **ULTRA**-performance in attics **and** sidewalls. Never settles.
- **ULTRA**-convenient. One product, one inventory, two applications.
- **ULTRA**-sustainable. Has a high degree of recycled content.
- **ULTRA**-fast, **ULTRA**-easy installation.

Jet Stream® **ULTRA** Glass Mineral Wool Blowing Insulation

APPLICATION

Knauf Insulation Jet Stream **ULTRA** Glass Mineral Wool Blowing Insulation is installed in open attics of both new and existing structures and/or in closed cavity applications with the BIBS system (Blow-in-Blanket System). Jet Stream **ULTRA**, when used in closed cavity applications is BIBS approved and can only be installed by BIBS certified installers to ensure the highest quality installed performance.

FEATURES AND BENEFITS

Excellent Thermal Performance

- Fills all gaps and voids, creating a thermal barrier against outside air and better temperature control.
- Resists heat flow with an R-value of
 - R-15 in 2 x 4 construction
 - R-23 in 2 x 6 construction

Convenient

- One product, one inventory, two applications.

Energy Conservation

- Reduces fuel usage and utility bills for heating and air conditioning.

Sustainable

- Has a high degree of recycled content.

Noise Reduction

- Improves Sound Transmission Class (STC) ratings by 4 to 10 points.

Installation

- Blows fast and smooth.

Permanence

- Non-combustible, non-corrosive.
- Will not rot, mildew or deteriorate.

THERMAL PERFORMANCE

Jet Stream **ULTRA** Blowing Insulation provides you with a choice of R-values based on the installed thickness and installed weight per square foot. The tables to the right show the minimum requirements for obtaining the desired R-value.

The stated thermal resistance (R-value) is provided by installing the required number of bags per 1,000 sq. ft. of net area, at not less than the labeled minimum thickness (per the manufacturer's instructions). Failure to install both the required number of bags and at least the minimum thickness will result in lower insulation R-values.

Field blending of this product with other loose fill insulation or application of this product in conjunction with adhesive or binder systems may affect its thermal performance and is not recommended by the manufacturer.

Framing Adjustments

As shown in the table on the last page, to compensate for the framing members in open attic applications, the number of bags per 1,000 sq. ft. of area.

SPECIFICATION COMPLIANCE

- ASTM C764; Type I
- HH-I-1030B; Class B
- Certified to GREENGUARD standards
- GREENGUARD Gold Certification and verified to be formaldehyde free.

Knauf Insulation Jet Stream **ULTRA** Glass Mineral Wool Blowing Insulation is manufactured with a high degree of recycled content and UL Environment verification every 6 months.

TECHNICAL DATA

Surface Burning Characteristics

- Does not exceed 25 Flame Spread, 50 Smoke Developed when tested in accordance with ASTM E84 and CAN 4-S102.2.

Critical Radiant Flux (ASTM E970)

- Greater than 0.12 W/cm².

Moisture Vapor Sorption (ASTM C1104)

- 5% maximum by weight.

Corrosion (ASTM C764)

- No greater than sterile cotton.

Microbial Growth (ASTM C1338)

- Does not support microbial growth.

Non-Combustibility (ASTM E136)

- No temperature rise above 54°F (30°C).

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' and a diameter of at least 3". Coils in the hose should not be less than 36" in diameter. Acceptable material feed rate is 5-35 lbs./minute. The recommended feed rate is 15-25 lbs./minute. For closed cavity applications, netting must be applied.

Packaging

- Jet Stream **ULTRA** Blowing Insulation is packaged in a strong, white poly bag that offers excellent protection from abuse, dust and moisture.
- Knauf Insulation packages are lightweight, stack without slipping and are easy to handle and store.



Open Attic Application

R-Value*	Bags/1,000 SF	Maximum Coverage	Minimum Weight	Initial Installed Thickness	Minimum Settled Thickness**
To obtain an insulation resistance (R-value) of:	The number of bags/1,000 SF of net area should not be less than:	Contents of this bag should not cover more than:	The weight/SF of installed insulation should not be less than:	Installed insulation should not be less than:	Installed insulation should not be less than:
R-60	29.7	33.6 SF	.952 lbs.	19.750"	19.750"
R-49	23.5	42.5 SF	.753 lbs.	16.375"	16.375"
R-44	20.9	47.8 SF	.670 lbs.	14.875"	14.875"
R-38	17.8	56.2 SF	.569 lbs.	13.000"	13.000"
R-30	13.6	73.3 SF	.437 lbs.	10.375"	10.375"
R-26	11.8	85.0 SF	.377 lbs.	9.125"	9.125"
R-22	9.8	102.2 SF	.313 lbs.	7.750"	7.750"
R-19	8.4	119.3 SF	.268 lbs.	6.750"	6.750"
R-13	5.7	175.3 SF	.183 lbs.	4.750"	4.750"
R-11	4.7	210.8 SF	.152 lbs.	4.000"	4.000"

Bag Net Weight - Nominal 32 lbs., Minimum 31 lbs.

Coverage and installation data were determined using a Volu-Matic® II blowing machine in third gear with 13" gate opening, 2.0 psi air pressure, 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 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 thicknesses are effectively the same.

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



Insulating attics with Jet Stream® **ULTRA** gives homes better thermal performance, reducing fuel usage and utility bills.



Jet Stream **ULTRA** is an excellent product for Blow-in-Blanket applications. It will dense-pack in wall cavities with no settling.

Cavity Wall Application

Framing	Cavity Depth	R-Value* To obtain an insulation resistance of	Density	Bags per 1000 SF The number of bags per 1000 square feet of net area should not be less than:	Maximum Coverage per Bag Contents of this bag should not cover more than:	Net Minimum Weight per SF The weight per square foot of installed insulation should not be less than:
2" x 4"	3.50"	R-15	1.8 lbs./cu. ft.	16.4 bags	61.0 sq. ft.	0.525 lbs.
2" x 6"	5.50"	R-23	1.8 lbs./cu. ft.	25.8 bags	38.8 sq. ft.	0.825 lbs.
2" x 8"	7.25"	R-31	1.8 lbs./cu. ft.	34.0 bags	29.4 sq. ft.	1.088 lbs.
2" x 10"	9.25"	R-39	1.8 lbs./cu. ft.	43.4 bags	23.1 sq. ft.	1.388 lbs.

Framing Adjustments - Open Attic Application

R-Value	Bags/1,000 SF					
	16" O.C. Framing			24" O.C. Framing		
	2 x 4	2 x 6	2 x 8	2 x 4	2 x 6	2 x 8
R-60	29.2	28.9	28.6	29.4	29.1	28.9
R-49	23.0	22.7	22.4	23.2	22.9	22.7
R-44	20.4	20.1	19.8	20.6	20.3	20.1
R-38	17.3	17.0	16.7	17.4	17.2	17.0
R-30	13.2	12.9	12.6	13.3	13.1	12.9
R-26	11.3	11.0	10.8	11.4	11.2	11.0
R-22	9.3	9.1	8.8	9.5	9.3	9.1
R-19	7.9	7.7	7.4	8.1	7.9	7.7
R-13	5.3	5.0	4.8	5.4	5.2	5.0
R-11	4.3	4.1	3.8	4.4	4.3	4.1

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 Jet Stream **ULTRA** Blowing Insulation represent typical average values determined in accordance with accepted test methods. The data is supplied as 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 assure information is current.

KNAUF INSULATION

it's time to save energy



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LEED Eligible Product

Use of this product may help building projects meet green building standards as set by the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

LEED v2009

MR Credit 4.1 - 4.2 Recycled Content
MR Credit 5.1 - 5.2 Regional Materials

LEED v4

Knauf Insulation offers several products for both envelope and mechanical systems that have ingredient disclosure and transparency. Please contact transparency@knaufinsulation.com for products that currently contribute to MR credits.



UL Environment GREENGUARD GoldSM

Knauf Insulation building insulation achieved UL Environment GREENGUARD Gold and is UL Environment validated to be formaldehyde free

UL Environment GREENGUARD Certification ProgramSM

Products are certified to UL Environment GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit ul.com/gg.

Declare.



Declare is a voluntary self-disclosure program aiming to transform the building materials industry towards healthier and more ecological products through ingredient transparency.

Participating in Declare means this product has voluntarily self-disclosed all ingredients in order to promote transparency.

Living Building Challenge Compliant means this product meets the requirements of the Red-List Imperative of the Living Building Challenge due to a temporary exception.

Living Building Challenge Red List Free means this product does not contain any ingredients on the Living Building Challenge's Red List.

This product is covered by one or more U.S. and/or other patents.
See patent www.knaufinsulation.us/patents.