queenfiber
Manufacturer of Natural Fiber Insulation, Fire and Sound Products MADE WITH 85% RECYCLED PAPER FIBER

SUBMITTAL FORM All GreenFiber Products Date:	MADE WITH 85% RECYCLED PAP
Submitted to:	
Submitted by:	
Job Reference:	
Job Name:	
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GREENFIBER PRODUCT ATTRIBUTES

Fire Safety

 All GreenFiber Products meet CPSC Flame Spread (>/= 0.12 Wcm²) and Smolder Combustion (<15% weight loss) requirements. The products are Class A rated with ASTM E 84 Smoke Development of < 35. All products also have ASTM E-84 Flame Spread of<25. Simulated building test have shown that structures insulated with cellulose insulation can stand up to 57% longer in the event of a fire compared to structures insulated with fiberglass batts. And GreenFiber has a number of proprietary Underwriters Laboratories Fire-Resistance Rated assemblies using various products. Learn more about this topic at Truth Be Told.

Environmental Attributes

• To learn more about the long list of Environmental attributes of all these products, please visit GreenFiber's website at <u>Truth Be Told</u>.

Underwriters Laboratories Environment (ULE)

• ULE Certifies GreenFiber will maintain a minimum of 85% recycled content. GreenFiber insulation contains a mix of pre- and post consumer recycled materials. 39% Post minimum consumer material.



Better Sound Control

GreenFiber Insulation is two to three times denser than other insulation products and it fills • gaps and voids in areas where it is applied. These characteristics help protect your home from unwanted noise.

Underwriters Laboratories Classification

All GreenFiber products are UL Classified and carry the Classification mark with the relevant properties and other information on the bags. This is true for both the United States and Canada



Test Requirements

- GreenFiber insulation meets all test requirements of ASTM C739-08 (US), CAN/ULC-S703-09 in Canada, CPSC 16 CFR 1209, 400, FTC 16 CFR 460, 1404, and all FHA, VA HUD and building code requirements. Tests include but are not limited to:
 - · Corrosiveness

Permanency

- · Fungi Resistance

- · Design Density
- Odor Emission
- · Open Flammability
 - · Separation of Chemicals
 - Smoldering Combustion
- **UNITED STATES** Minimum Thickness Product Product Applicable Standards / Description **R-Value** (Inches) Code **Specifications** Туре Installed Settled Stabilized Designed for new Federal Regulation 16 R-19 5.74 5.34 INS500 CFR 1209, 16 CFR 1404. Formula construction or retrofit stabilized attic applications. R-30 9.00 8.37 16 CFR 460. ASTM C-739, ASTM E-84, Flame Made of 85% recycled paper R-38 11.32 10.53 fibers² treated for fire Spread Index ≤5, Smoke resistance. Developed Index ≤35. R-49 14.45 13.44 UL ER15890-01 Report All Borate Designed for new Federal Regulation 16 R-19 5.65 5.25 INS735 CFR 1209, 16 CFR 1404, Stabilized construction spray applied wall applications. Can also be 16 CFR 460. ASTM C-Formula R-30 8.89 8.27 used in stabilized attic, floor 739, ASTM E-84, Flame and any dry-dense pack Spread Index ≤5, Smoke 10.42 applications. Made of 85% R-38 11.20 Developed Index ≤35. UL ER15890-01 Report recycled paper fibers² treated for fire resistance. R-49 14.33 13.33 All Borate Designed for new Federal Regulation 16 R-19 5.68 5.28 INS745 Stabilized CFR 1209, 16 CFR 1404, construction spray applied wall applications. Can also be 16 CFR 460. ASTM C-Formula R-30 8.89 8.27 739. ASTM E-84. Flame used in stabilized attic, floor and any dry-dense pack Spread Index ≤5, Smoke R-38 11.18 10.40 application. Made of 85% Developed Index ≤35. recycled paper fibers² UL ER15890-01 Report R-49 14.28 13.28 treated for fire resistance.
- Surface Burning Characteristics
- Critical Radiant Flux · Moisture Vapor Sorption · Thermal Resistance

UNITED STA	TES - contin	ued				
Product	Product			Minimum (mm)	Thickness	Applicable Standards /
Type Code	Description	RSI	Applied	Settled	Specifications	
Loose Fill Formula INS515LD	INS515LD	Designed for new construction or retrofit	R-19	5.88	5.29	Federal Regulation 16 CFR 1209, 16 CFR 1404,
		loose-fill attic and wall	R-30	9.22	8.30	16 CFR 460. ASTM C- 739, ASTM E-84, Flame Spread Index ≤5, Smoke Developed Index ≤35. UL ER15890-01 Report
		applications. Made of 85% recycled paper fibers ²	R-38	11.60	10.44	
		treated for fire resistance.	R-49	14.82	13.34	
All Borate		Designed for new				Federal Regulation 16
Loose Fill	INS765LD	construction or retrofit	R-19	5.86	5.27	CFR 1209, 16 CFR 1404,
Formula	(Low Dust)	loose-fill attic and wall applications. Made of	R-30	9.19	8.27	16 CFR 460. ASTM C- 739, ASTM E-84, Flame
		85% recycled paper	R-38	11.57	10.41	Spread Index ≤5, Smoke
		fibers ² treated for fire resistance.	R-49	14.78	13.30	Developed Index ≤35. UL ER15890-01 Report
Premium All		Premium Insulation	D (C		- 45	Federal Regulation 16
Borate Loose	INS770LD	designed for retrofit dry	R-19	6.06	5.45	CFR 1209, 16 CFR 1404,
Fill Formula	(Low Dust)	dense pack walls or loose fill attic applications. Made of 85% recycled	R-30	9.42	8.48	16 CFR 460. ASTM C- 739, ASTM E-84, Flame
			R-38	11.82	10.64	Spread Index ≤5, Smoke
		paper fibers ² treated for fire resistance.	R-49	15.08	13.57	Developed Index ≤35. UL ER15890-01 Report
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Blow in Natural Fiber Insulation	INS541LD	Designed for loose- fill attic and wall applications. Made of 85% recycled paper	R-19	6.19	5.57	Federal Regulation 16 CFR 1209, 16 CFR 1404, 16 CFR 460. ASTM C- 739, ASTM E-84, Flame
(Low Dust)	(Low Dust)		R-30	9.57	8.62	
	fibers ² treated for fire	R-38	11.97	10.77	Spread Index ≤5, Smoke	
		resistance.	R-40	15.20	13.68	Developed Index ≤35. UL ER15890-01 Report
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Blown in Natura Fiber Insulation		Designed for loose-fill attic attic and wall applications.	R-19	6.19	5.57	Federal Regulation 16 CFR 1209, 16 CFR 1404,
	(Low Dust)		R-30	9.57	8.62	16 CFR 460. ASTM C- 739, ASTM E-84, Flame
			R-38	11.97	10.77	Spread Index ≤5, Smoke
		R-49	15.20	13.68	Developed Index ≤35. UL ER15890-01 Report	
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Blown in Natura Fiber Insulation		Designed for loose-fill attic and wall applications.	R-19	6.19	5.57	Federal Regulation 16 CFR 1209, 16 CFR 1404,
	Made of 85% recycled	R-30	9.57	8.62	16 CFR 460. ASTM C-	
		paper fibers ² treated for fire resistance.	R-38	11.97	10.77	739, ASTM E-84, Flame Spread Index ≤5, Smoke
		R-49	15.20	13.68	Developed Index ≤35. UL ER15890-01 Report	
Loose Fill Formula	INS510LD	loose-fill attic and wall applications. Made of 85% recycled paper	R-19	5.84	5.25	Federal Regulation 16 CFR 1209, 16 CFR 1404, 16 CFR 460. ASTM C- 739, ASTM E-84, Flame Spread Index ≤5, Smoke Developed Index ≤35.
	-		R-30	9.13	8.22	
			R-38	11.49	10.34	
	fibers ² treated for fire resistance.	R-49	14.71	13.24	UL ER15890-01 Report	

UNITED STATES WALL SPRAY	(Sidewalls)	Wall Framing	Minimum Thickness	
Wall Spray INS735 INS745	R-13	(2x4)	3.50	Federal Regulation 16 CFR 1209, 16 CFR 1404, 16 CFR 460. ASTM C-
	R-21	(2x6)	5.50	739, ASTM E-84, Flame Spread Index ≤5, Smoke Developed Index ≤35. UL ER15890-01 Report

UNITED STATES Dry Dense Pack	(Sidewalls)	Wall Framing	Minimum Thickness	
Dry Dense-Pack INS417LD INS441LD INS515LD INS541LD INS735 INS745	R-13	(2x4)	3.50	Federal Regulation 16 CFR 1209, 16 CFR 1404, 16 CFR 460. ASTM C-
INS765LD INS770LD INS510LD	R-21	(2x6)	5.50	739, ASTM E-84, Flame Spread Index ≤5, Smoke Developed Index ≤35. UL ER15890-01 Report

CANADA						
Product Type	Product Code	Description	R-Value	Minimum Thicknes Installed	s (Inches) Settled	Applicable Standards/ Specifications
Stabilized Formula	INS500-CAN	Designed for new CAN construction or retrofit stabilized attic appliations. Made of 85% recycled paper fibers ² treated for	RSI 5.6	238	221	CAN/ULC-S703-09 CAN/ULC-S102.2
Type 2 Open	INOJUO-OAN		RSI 7.0	297	277	
			RSI 7.7	327	304	
		fire resistance.	RSI 8.8	374	348	
			RSI 10.6	450	419	
Loose Fill Insulation	INS552LD-CAN	Designed for new construction or retrofit	RSI 5.6	248	221	CAN/ULC-S703-09 CAN/ULC-S102.2
Type 1 Open	(Low Dust)	loose applications. Made	RSI 7.0	310	276	
Type 1 Closed		of 85% recycled paper fibers ² treated for fire	RSI 8.81	390	348	
		resistance	RSI 10.6	469	418	
Loose Fill Formula	INS550LD-CAN	Designed for loose- 0LD-CAN fill attic and wall	RSI 5.6	248	221	CAN/ULC-S703-09 CAN/ULC-S102.2
Type 1 Open	(Low Dust)	applications. Made of	RSI 7.0	310	276	
Type 1 Closed		85% recycled paper fibers ² treated for	RSI 7.7	341	304	
		fire resistance.	RSI 8.8	390	348	
			RSI 10.6	469	419	1
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Stabilized Formula	en applications. Made of 85%	RSI 5.6	235	219	CAN/ULC-S703-09 CAN/ULC-S102.2	
Type 1 Closed		loose-fill attic and wall	RSI 7.0	293	274	G/ 11/ OLO 0102.2
Type 2 Open Type 2 Closed		RSI 7.7	323	302		
		treated for fire resistance	RSI 8.8	367	373	
			RSI 10.6	440	411	1

CANADA - continued							
Product Product Description		R-Value	Minimum Thickness (Inches)		Applicable Standards/		
Туре	Code		Install	Installed	Settled	Specifications	
Loose Fill Insulation	INS555LD-CA	Designed for new		246	219	CAN/ULC-S703-09 CAN/ULC-S102.2	
Type 1 Open	(Low Dust)	loose-fill attic and wall	RSI 7.0	304	271		
Type 1 Closed		applications. Made of 85% recycled paper fibers ²	RSI 8.8	384	343		
		treated for fire resistance.	RSI 10.6	461	411		
Loose Fill Formula	Loose Fill Designed for new Formula INS430LD construction or retrofit Type 1 Open (Low Dust) loose-fill attic and wall Type 1 Closed applications. Made of 85%	RSI 5.6	248	221	CAN/ULC-S703-09 CAN/ULC-S102.2		
Type 1 Open		RSI 7.0	310	276			
Type T Closed		RSI 7.7	341	304			
		treated for fire resistance.	RSI 8.8	390	348		
			RSI 10.6	469	419		

Definitions:

"Stabilized" in the document refers to blown-in-products that require water to activate an adhesive, for either Stabilized attic or Wall Spray application.

"Loose-fill" in the document refers to blown-in-products that do not require water for application, for either loose fill attic or Dry Dense-Pack application.

¹This comparison is based on the R-19 R-Value in a one square-foot area and includes the production and energy used in the insulation manufacturing process.

²As certified by ULE, GreenFiber maintains a minimum 85% recycled content for all U.S. and Canadian products.

US GreenFiber (USGF) does not provide architectural, inspection, engineering or building science services and disclaims any responsibility with respect thereto. USGF does not guarantee, warrant or attempt to determine whether a building structure, design or the use of material therein complies with any applicable codes, standards, guidelines or standards of workmanship. Adding insulation to any part of a home's envelope will cause changes in air, heat and moisture flow. The user must understand how the use of insulation will change the performance of a dwelling prior to installation. The user maintains the full and complete responsibility to comply with all codes, laws and regulations applicable to the safe and proper use, handling and installation of the product and should consult with an architect, engineer, building scientist, and/or a rater/energy specialist for all construction, design and performance related questions. The information contained herein is believed to be accurate as of the time of preparation. However, USGF makes no warranty concerning the accuracy of this information. USGF will not be liable for claims relating to the use of information contained herein, regardless of whether it is claimed that the information or recommendations are inaccurate, incomplete or incorrect.