MANSON INSULATION

AKOUSTI-LINER™ and Acousti-Shield TM

AKOUSTI-LINER™ is a flexible, mat-faced insulation with a tightly bonded mat to provide a smooth, tough surface that resists damage. Designed as a formaldehyde-free insulation for the interior of sheet metal ducts used in HVAC, this product provides a combination of sound absorption, low thermal conductivity and minimal airstream surface friction.

Acousti-Shield TM is a formaldehyde-free brown flexible glass mineral wool blanket with a black mat facing adhered to one surface. It provides thermal and acoustical insulation for theaters and spaces.

Performance dashboard

Features & functionality

Greatly reduces noise

Withstands damage from normal handling

Lowers operating costs

Low VOC emission and formaldehyde-free

Visit Manson for more product specifications:
AKOUSTI-LINER™, Acousti-Shield TM

Environment & materials

Improved by:
Utilization of recycled glass

Manson's original plant-based bio-based binder technology

Optimized compression packaging

Certification & rating systems:
UL GREENGUARD Gold certified

UL Validated recycled content

UL Validated formaldehyde-free

Audited, European Certification Board for Mineral Wool Products exoneration process

ASTM C1071; Type I, ASTM C 665

CSI MasterFormat® 23 07 13
Thermal Insulation Guide Specification
For spec help, contact us or call 317 421 8727

See LCA, interpretation & rating systems

See materials, interpretation & rating systems

SM Transparency Report™ + Material Health Overview™

VERIFICATION	LCA
3rd party reviewed	
	Transparency Report
3rd party reviewed	
	Material evaluation

This declaration was independently verified by NSF to ISO 21930:2017, EN 15804, the UL Environment PCR, and ISO 14025:2006.

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Contact us

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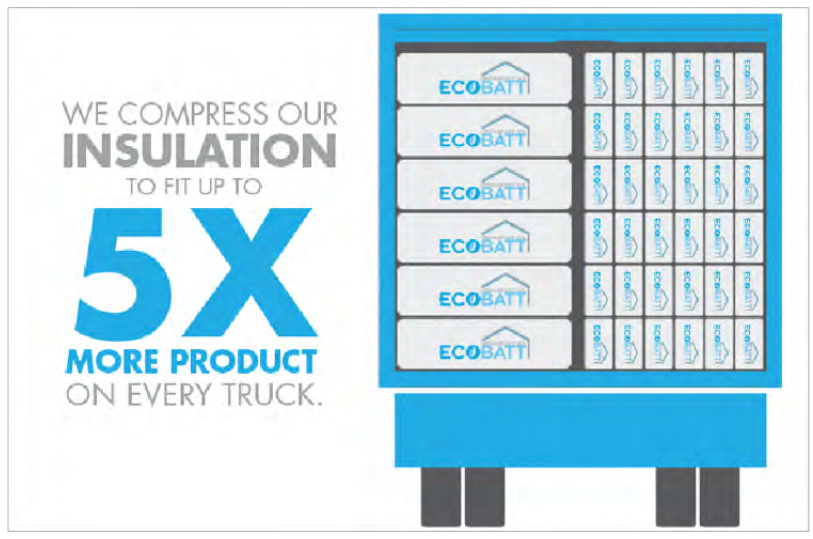
TRANSPORTATION

Leverage compression packaging

Glass is a high modulus material, which helps to facilitate compression packaging. We compress our insulation to fit up to five times more product on every truck. This compression means:

- More material can fit on one truck when compared to other insulation materials
- Fewer packages on a job
- Fewer deliveries needed



INSTALLATION AND MAINTENANCE

Be confident in glass mineral wool's safety

In the past, a label regarding the carcinogenic potential of insulation made from glass fibers was required on all packaging. Following forty years of research, glass mineral wool has been exonerated entirely. Glass mineral wool is comprised of fibers that are biosoluble, meaning that the fibers dissolve in the body in a short period of time and exit the body with normal bodily functions. The scrutiny glass mineral wool has undergone is now seen as proof of its safety.

Meet and exceed green standards

GREENGUARD certified On the forefront of indoor air quality, Knauf Insulation was the first GREENGUARD certified product in 2002. This achievement led us to understand the impact our formaldehyde-free products could have on the indoor environment. The formaldehyde-free claim is third party validated by UL Environment.

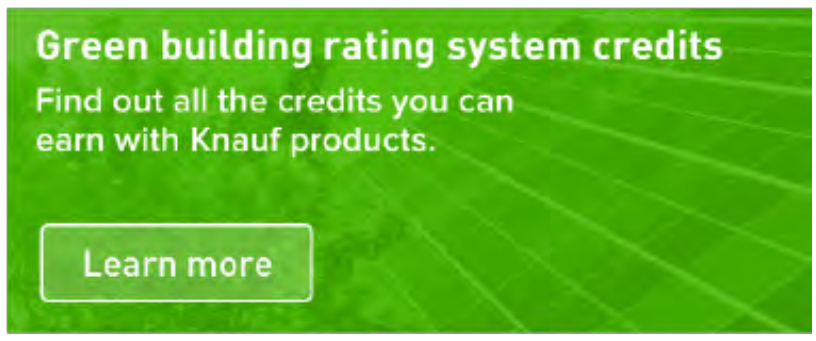
Red List Free Since 2012, Knauf Insulation North America used the Living Building Challenge (LBC) Red List as its developmental benchmark. The Red List is a list of chemicals that are avoided in material imperative for the construction of LBC buildings. Formaldehyde is just one of about 800 chemicals on the Red List. Manson Insulation has chosen the Health Product Declaration® (HPD) Collaborative as its standard for reporting building product content and associated health information.

EUCEB tested Glass fiber is perhaps the most widely studied building material available today. All of our processes and formulations are voluntarily third-party audited for compliance with the health and safety exoneration criteria for glass and rock based fiber through the European Certification Board for Mineral Wool Products (EUCEB) exoneration process. This guarantees the formulations are biosoluble and pose no health concerns. Having 35 years of research behind its safety, perhaps no other building material has been as thoroughly evaluated as fiberglass products. We believe a safe product is one that has been thoroughly evaluated.

Green building rating systems

Our products offer a vast array of potential credits for major green building rating systems, including: WELL, LEED v4, International Green Construction Code, Green Guide for Heath Care, NAHB Green Building Standard and more.

Visit the green building rating systems page to see all the credits you can earn using Manson and Knauf Insulation products.



DISPOSAL

Promote Recycling

Manson and Knauf are recycling advocates. We take every opportunity to advocate for recycling and financially support the Glass Recycling Coalition (GRC). We feel that a comprehensive understanding of the benefits of recycling will lead to greater recycling adoption and more promotion by state and local governments. While our only option is to landfill our products at end of life, that doesn't stop us from encouraging consumers to recycle other products, particularly glass bottles.

SM Transparency Report™ + Material Health Overview™

VERIFICATION	LCA
3rd party reviewed	NSF
Transparency Report	
3rd party reviewed	NSF
Material evaluation	

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Additional EPD content required by: ULE PCR Parts A and B for Building Envelope Thermal Insulation

AKOUSTI-LINER™ and AKOUSTI-SHIELD™

Data

Background This company-specific product/product group specific declaration was created by collecting product data over the course of a year for each line at each location the product was manufactured. For products with multiple manufacturing locations, data are a weighted average by production volume at each location. For average products, which are products that have more than one facing option, data are a weighted average of the mass of each functional unit. The reference service life applies for the reference in-use conditions only.

Allocation Since only facility-level data were available, allocation among a facility's co-products was used to determine the input and output flows associated with each product. Allocation of materials and energy was done on a mass basis for all products except for the facing, which was allocated based on product area. Allocation of transportation was based on either weight or volume, depending on which was found to greater restrict the amount of cargo. Glass cullet is assumed to enter the system burden-free in that burden associated with the production of virgin glass is not allocated to the fiberglass life cycle. Likewise, the system boundary was drawn to include landfilling of fiberglass at end-of-life (following the polluter pays principle), but exclude any credits from recovery.

Cut-off criteria For the inclusion of mass and energy flows are 1% of renewable primary resource (energy), 1% nonrenewable primary resource (energy) usage, 1% of the total mass input of that unit process, and 1% of environmental impacts. The total of neglected input flows per module does not exceed 5% of energy usage, mass, and environmental impacts. The only exception to these criteria is substances with hazardous and toxic properties, which must be listed even when the given process unit is under the cut-off criterion of 1% of the total mass. No known flows are deliberately excluded from this declaration.

Scenarios and additional technical information

PARAMETER	VALUE	UNIT
Transport to the building site [A4]		
Vehicle type	Truck	
Average distance from Shelbyville to installation site	680	mi
Capacity utilization by mass	27	%
Installation into the building [A5]		
Distance from installation site to disposal	100	mi
Mass of paper packaging waste to disposal	0.0181	kg
Mass of plastic packaging waste to disposal	.0322	kg
Biogenic carbon contained in paper packaging	6.15E-03	kg CO_2
GWP based in biogenic carbon content of paper packaging	1.70E-02	kg CO_2e
GWP based in biogenic carbon content of plastic packaging	0	kg CO_2e
Disposal/reuse/recycling [C1-C4]		
Distance from installation site to disposal	100	mi
Mass of product waste to disposal	0.927	kg
Removals of biogenic carbon (excluding packaging)	1.91E-03	kg CO_2

Resource use, output and waste flows, and carbon emissions and removals per functional unit

Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	Total
Resource use indicators																
Renewable primary energy used as energy carrier (fuel)	MJ, LHV	2.46E+00	6.70E-02	2.62E-03	0	0	0	0	0	0	0	0	5.11E-03	0	4.46E-02	**2.58E+00**
Renewable primary resources with energy content used as material	MJ, LHV	3.38E-04	0	3.10E-07	0	0	0	0	0	0	0	0	0	0	0	**3.39E-04**
Total use of renewable primary resources with energy content	MJ, LHV	2.46E+00	6.70E-02	2.62E-03	0	0	0	0	0	0	0	0	5.11E-03	0	4.46E-02	**2.58E+00**
Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	3.80E+01	2.75E+00	5.20E-02	0	0	0	0	0	0	0	0	2.10E-01	0	6.51E-01	**4.17E+01**
Non-renewable primary resources with energy content used as material	MJ, LHV	3.99E-08	0	3.18E-11	0	0	0	0	0	0	0	0	0	0	0	**3.99E-08**
Total use of non-renewable primary resources with energy content	MJ, LHV	3.80E+01	2.75E+00	5.20E-02	0	0	0	0	0	0	0	0	2.10E-01	0	6.51E-01	**4.17E+01**
Secondary materials	kg	5.29E-01	0	0	0	0	0	0	0	0	0	0	0	0	0	**5.29E-01**
Renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Non-renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Recovered energy	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Use of net fresh water resources	m3	3.21E+02	7.52E+00	1.49E+00	0	0	0	0	0	0	0	0	5.74E-01	0	2.09E+01	**3.52E+02**

Output flows and waste category indicators

Hazardous waste disposed	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Non-hazardous waste disposed	kg	0	0	5.03E-02	0	0	0	0	0	0	0	0	0	0	9.27E-01	**9.77E-01**
High-level radioactive waste, conditioned, to final repository	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Materials for recycling	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Exported energy	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**

Carbon emissions and removals

Biogenic Carbon Removal from Product	kg CO_2	2.67E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	**2.67E-02**
Biogenic Carbon Emission from Product	kg CO_2	2.82E-02	0	0	0	0	0	0	0	0	0	0	0	0	1.91E-03	**3.01E-02**
Biogenic Carbon Removal from Packaging	kg CO_2	2.55E-02	0	0	0	0	0	0	0	0	0	0	0	0	0	**2.55E-02**
Biogenic Carbon Emission from Packaging	kg CO_2	0	0	6.15E-03	0	0	0	0	0	0	0	0	0	0	0	**6.15E-03**
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO_2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Calcination Carbon Emissions	kg CO_2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Carbonation Carbon Removals	kg CO_2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes	kg CO_2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**

TRACI v2.1 disaggregated results per functional unit

LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. These six impact categories required by the PCR are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development; however, the EPD users shall not use additional measures for comparative purposes. Impact categories which were not required by the PCR are included in part to allow for the calculation of millipoints using the SM2013 Methodology, but it should be noted that there are known limitations related to these impact categories due to their high degree of uncertainty. LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Acidification	kg SO_2 eq	6.76E-03	1.04E-03	1.86E-05	0	0	0	0	0	0	0	0	6.46E-05	0	1.90E-04
Eutrophication	kg N eq	5.49E-04	8.33E-05	4.62E-06	0	0	0	0	0	0	0	0	5.41E-06	0	9.62E-06
Global warming	kg SO_2 eq	2.26E+00	1.95E-01	3.19E-02	0	0	0	0	0	0	0	0	1.49E-02	0	4.06E-02
Ozone depletion	kg CFC-11 eq	7.94E-10	1.34E-12	1.92E-11	0	0	0	0	0	0	0	0	1.02E-13	0	6.34E-13
Smog	kg O_3 eq	7.73E-02	3.49E-02	3.87E-04	0	0	0	0	0	0	0	0	2.14E-03	0	3.74E-03
Fossil fuel depletion	MJ, LHV	2.89E+00	3.70E-01	6.47E-03	0	0	0	0	0	0	0	0	2.82E-02	0	8.14E-02

Additional environmental information

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4
Ecotoxicity	CTUe	2.15E-01	2.43E-02	3.53E-04	0	0	0	0	0	0	0	0	1.85E-03	0	3.57E-03
Carcinogenics	CTUh	2.27E-09	1.03E-10	8.49E-12	0	0	0	0	0	0	0	0	7.86E-12	0	1.77E-10
Non-carcinogenics	CTUh	2.46E-07	7.67E-09	1.06E-09	0	0	0	0	0	0	0	0	5.85E-10	0	2.01E-08
Respiratory effects	kg PM2.5 eq	2.19E-03	5.43E-05	1.32E-05	0	0	0	0	0	0	0	0	3.41E-06	0	1.36E-04

The product does not contain substances that are identified as hazardous according to standards or regulations of the Resource Conservation and Recovery Act (RCRA), Subtitle C, nor does it (or its associated processes) release dangerous, regulated substances that affect health and environment, including indoor air emissions, gamma or ionizing radiation emissions, or chemicals released to the air or leached to water and soil.

SM Transparency Report™ + Material Health Overview™

VERIFICATION LCA

3rd party reviewed

Transparency Report

3rd party verified

Material evaluation

Validity: 12/03/18 – 12/03/23
MAN – 12032018 – 004

This declaration was independently verified by NSF to ISO 21930:2017, EN 15804, the UL Environment PCR, and ISO 14025:2006.

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