





LEED version 4

PRODUCT DATA FOR CERTIFICATION

WOOD WOOL – HERAKLITH

LEEDv4 (Leadership in Energy and Environmental Design) is a voluntary standard that defines high performance green buildings which are healthier, more environmentally responsible, and more profitable structures. Credits for certification can be earned in various categories, each with a unique focus on sustainable design: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation and design process.



KNAUF INSULATION products can put you on the right track for the highest result for certification!

LEED - Credit Category code	Definition	Knauf Insulation Products contribution	Contributes towards
Energy and Atmosphere (EA) Optimize Energy Performance 	To achieve increasing levels of performance beyond the prerequisite standard to reduce environmental and economic harms associated with excessive energy use.	Heraklith products help reducing energy demand through very high insulation efficiency.	20 points
Materials and Resources (MR) Building Product Disclosure and Optimization – Environmental Product Declarations 	To encourage the use of products where Life Cycle Assessment (LCA) is available and have environmentally, economically and socially preferable LCA. To reward project including products with verified LCA.	Third party verified Environmental Product Declarations (EDPs) are available on line for Heraklith products ¹ .	2 points
Materials and Resources (MR) Building Product Disclosure and Optimization – Sourcing of Raw Materials 	To encourage the use of products where LC A is available and have environmentally, economically and socially preferable LCA. To reward project including products verified to be extracted or produced in a responsible manner.	Heraklith Products are manufactured with up to 80% of wood-based materials certified following FSC labels (remaining part is the binder) ² . 	1 point

¹ <http://www.knaufinsulation.com/en/product-sustainability>

² See annexe 1

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LEED - Credit Category code	Definition	Knauf Insulation Products contribution	Contributes towards
Materials and Resources (MR) Building Product Disclosure and Optimization – Material Ingredients	To encourage the use of products where LCA is available and have environmentally, economically and socially preferable LCA. To reward project for which the products chemical ingredients are inventoried.	Heraklith products contains no ingredients listed on the REACH Authorization or Candidate list or Substances of Very High Concern list. Evidence are available on line ³ .	1 point
Indoor Environmental Quality (EQ) Low-Emitting Materials 	To reduce concentrations of chemical contaminants, as Volatile Organic Compound (VOC) that can damage air quality, human health, productivity and the environment. Emissions from ceilings, walls, thermal, and acoustic insulation are a complete category to be assessed.	Products are compliant with the German AgBB Testing and Evaluation Scheme and the higher category (A+) of the French labelling. They are certified with Blue Angel low air emission ecolabel (following RAL-UZ-132) ⁴ ,	3 points 
Indoor Environmental Quality (EQ) Indoor Air Quality Assessment	To establish better quality indoor air in the building after construction and during occupancy	The quality of the Heraklith products help to reach appropriate concentration level regarding formaldehyde and TVOCs during indoor air quality assessment.	2 points
Indoor Environmental Quality (EQ) Acoustic Performance	To provide workspaces and classrooms that promote occupants' well-being, productivity, and communications through effective acoustic design.	Heraklith products have high performance acoustic properties ⁵ .	2 points
Indoor Environmental Quality (EQ) Thermal Comfort	To promote occupants productivity, comfort, and well-being by providing quality thermal comfort.	Insulation is a design alternative strategy. Heat radiation and air-conditioning will be minimized which will have positive comfortability feel and increase productivity for workers.	1 point

³ <http://www.knaufinsulation.com/en/sustainable-buildings-and-green-building-rating-systems>

⁴ See annexe 3

⁵ See annexe 3

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Annexe 1: FSC certificate – example for Knauf Insulation Simbach Plant





This certificate confirms that the procedure for the production and/or the trade of

Wood-wool board and wood-wool composite board

produced and/or traded by
Knauf Insulation Operation GmbH

DE-84359 Simbach a. Inn, Heraklithstraße 8

at the above facility has undergone an initial inspection, is subject to continuous inspection and complies with the requirements of the rules and standards


FSC
www.fsc.org
FSC® A000513

Chain of Custody

Standard FSC-STD-40-004 (V2-1) – Chain_of_Custody_Certification

as long as the requirements are fulfilled. Detailed information on the scope of the certificate can be found at <http://info.fsc.org>.

This certificate is property of the Holzforschung Austria, a Certification Body accredited by the Forest Stewardship Council A. C. (Id. Nr. FSC-ACC-024). Certificates and copies thereof need to be returned immediately upon request. The validity of the certificate shall be verified at <http://info.fsc.org>. The certificate itself does not constitute evidence that a certain product supplied by the Certificate Holder is FSC certified (or FSC Controlled Wood). Products offered, sold or delivered by the Certificate Holder can only be considered as included in the scope of the certificate, if they are clearly declared as certified on invoices and delivery notes.

Certificate number: HFA-COC-100141
Date of first issuance: 03.03.2015
Date of issuance: 03.03.2015
Valid until: 02.03.2020
Version: 1


Dr. Michael Golser
Authorised Signatory


Dr. Manfred Brandstätter
Head of Certification Body

 **HOLZ FORSCHUNG AUSTRIA – ÖSTERREICHISCHE GESELLSCHAFT FÜR HOLZFORSCHUNG** ZVR 850936522
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Annexe 2: REACH compliance document

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WOOD WOOL – HERAKLITH



Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH); Regulation (EC) No 1907/2006.

Dear Customer

Thank you for your enquiry with regard to the following products: –

KNAUF INSULATION WOOD WOOL PRODUCTS.

Knauf Insulation Wood Wool products are classified as Articles with no intended release and therefore do not require registration under the Registration, Evaluation, Authorisation of Chemicals (REACH) regulations; 1907/2006

Knauf Insulation Wood Wool products do not contain any substances listed under the Candidate List of Substances of Very High Concern for Authorisation in concentration higher than 0.1% (w/w). Furthermore these products do not contain neither any substances listed under the Annex XIV of the Regulation (EC) 1907/2006 – List of substances subject to authorisation

If you have any questions please do not hesitate to contact us; details are provided below.

Bruno BLIKI
Product Regulatory Affairs Manager
Knauf Insulation
SDS@knaufinsulation.com

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Annexe 3: Blue Angel Requirements and certificate.

From document: “Basic Criteria for Award of the Environmental Label; Low-Emission Thermal Insulation Material and Suspended Ceilings for Use in Buildings RAL-UZ 132”.

The product shall not exceed the emission values listed in Table 1 in the test chamber in conformity with the „Health risk assessment process for emissions of volatile organic compounds (VOC) from building products” developed by the Committee for Health-related Evaluation of Building Products.

Table 1: Emission Values

Substance	Requirements Final Value 28 Days
Total organic compounds within the retention range $C_6 - C_{16}$ (TVOC)	$\leq 100 \mu\text{g}/\text{m}^3$
Total organic compounds within the retention range $> C_{16} - C_{22}$ (TSVOC)	$\leq 20 \mu\text{g}/\text{m}^3$
C substances ¹²	$\leq 1 \mu\text{g}/\text{m}^3$ per single value
Total VOC without LIC ^{13, 14}	$\leq 50 \mu\text{g}/\text{m}^3$
R value	≤ 1
Formaldehyde	$\leq 0.05 \text{ ppm}$

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