

WOOD WOOL - HERAKLITH

LEEDv4.1 (Leadership in Energy and Environmental Design) is a voluntary standard that defines high performance green buildings that 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 into the 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 (building envelop, partition walls, HVAC equipment, floors and ceilings).	18 points
Materials and Resources (MR) Building Product	To encourage the use of products where Life Cycle Assessment (LCA) is available and have	Third party verified Environmental Product Declarations (EPDs) are	2 points
Disclosure and Optimization – Environmental Product Declarations	environmentally, economically and socially preferable LCA. To reward project including products with verified LCA.	available on line for Heraklith homogeneous board, Heratekta and Tektalan,1.	MRPI



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 sourced in a responsible manner.

Heraklith Products are manufactured with up to 80% of wood-based materials certified following FSC or PEFC labels (remaining part is the binder)².

1 point



¹ https://www.knaufinsulation.com/download-epd-wood-wool?environmental_product_declaration=74; https://www.mrpi.nl/epd-certificaten

² See annex 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 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 SAME FOR THE PROPERTY OF THE PROPERT
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.	Products have high performance acoustic properties ⁵ . They reduce HVAC background noise, increase sound insulation of building envelope, partitions, ceilings and aid in controlling reverberation time.	1 point
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 See annex 2 ⁴ See annex 3			



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1) Annex 1: PEFC certificate for Simbach Plant and FSC certificate for Zalaegerszeg supplier





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Annex 2: REACH compliance document





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Annex 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".

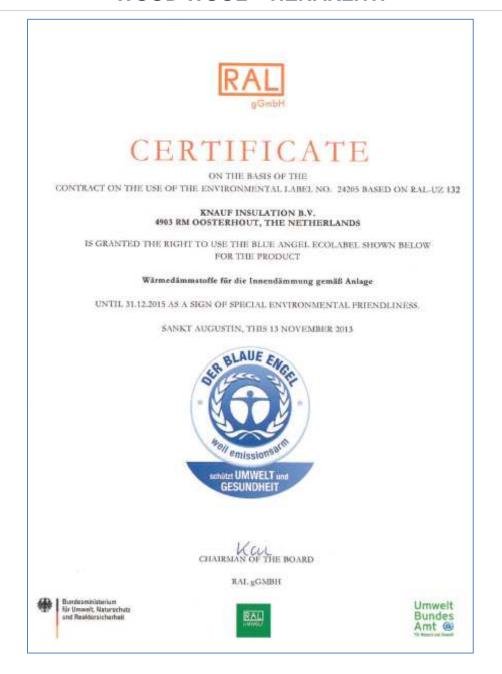
The product shall not exceed the emission values listed in Table 1 in the test chamber in conformity with the "Health risk assessment process for emissions of volatile organic compounds (VOC) from building products" developed by the Committee for Health-related Evaluation of Building Products.

Table 1: Emission Values

Substance	Requirements Final Value 28 Days
Total organic compounds within the retention range $C_8 - C_{18}$ (TVOC)	≤ 100 μg/m³
Total organic compounds within the retention range $> C_{16} - C_{22}$ (TSVOC)	≤ 20 μg/m³
C substances 12	≤ 1 μg/m³ per single value
Total VOC without LIC 13, 14	<u><</u> 50 μg/m³
R value	<u><</u> 1
Formaldehyde	≤ 0.05 ppm



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Annex 4: Sound absorption example

 α coefficient is the coefficient for sound absorption.

