WELL VERSION 2

PRODUCT DATA FOR BUILDING CERTIFICATION

GLASS MINERAL WOOL WITH ECOSE® TECHNOLOGY

WELL v2 operates on a points-based system. All optimisations have maximum point values. The point value of a feature is determined by its potential for impact. This is defined as the extent to which a feature addresses a specific health and wellness concern, or an opportunity for health promotion, as well as the potential impact of effective intervention.

Knauf Insulation products can put you on the right track for the highest result into the certification! Refer to the table below to see how many points our products contribute in each category.

Feature	Part	Definition	Knauf Insulation Products contribution
A01. **Fundamental Air Quality** **Precondition**	**A01.2** Meet thresholds for Organic Gases	To provide acceptable air quality levels as determined by public health authorities.	ECOSE Technology products are compliant with the German AgBB Testing and Evaluation Scheme, the higher category (A+) of the French labelling and the Blue Angel. The binder is without added phenol formaldehyde. Products with or without facing are certified for **Indoor Air Comfort Eurofins Gold**[1] and **Blue Angel**[2]
A05. **Enhanced Air Quality** **1 point**	**A05.2** Meet Enhanced Thresholds for Organic Gases	To go above current guidelines to provide enhanced air quality levels that have been linked to improved human health and performance.	
T01. **Thermal Performance** **Precondition**	**T01.1** Provide acceptable Thermal Environment	To create indoor thermal environments that provide comfortable thermal conditions to the majority of people in support of their health, wellbeing and productivity.	Glass Mineral Wool products help reducing energy demand through very high insulation efficiency.
S01. **Sound Mapping** **Precondition**	**S01.1** Label Acoustic zone	To create an acoustical plan that identifies internal and external noise sources that can negatively impact the acoustical environment of interior spaces.	Glass Mineral Wool products have high performance **acoustic properties**[3] . They reduce HVAC background noise, increase sound insulation of building envelope, partitions, ceilings and aid in controlling reverberation time
	S01.2 Provide Acoustic Design Plan		
S02. **Maximum Noise Levels** **3 points**	**S02.1** Limit Background Noise Levels	To facilitate comfortable interior noise levels. This feature can operate in tandem with Feature S01: Sound Mapping.	
S03. **Sound Barriers** **3 points**	**S03.1/S03.2** Design for Sound Isolation at Walls and Doors & achieve sound insulation at walls	To bolster acoustical privacy between rooms. This feature can operate in tandem with Feature S01: Sound Mapping	

[1] You can view our Eurofins Indoor Air Comfort Gold certificates via this link

[2] See https://www.blauer-engel.de/en/brand/knauf-insulation

[3] See annex 1 Acoustic performance

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Feature	Part	Definition	Knauf Insulation Products contribution
X05. **Enhanced Material Restrictions** **2 points**	**X05.2** Select Compliant Architectural and Interior Products	To restrict halogenated flame retardants (HFRs), Per- and polyfluoroalkyl substances (PFAS) and select phthalates commonly used in building materials and products. Insulation products, including thermal and acoustic insulation in walls, ceilings, ducts, tubes and pipes, contain 100 ppm (0.01%) by weight or less of halogenated flame retardants (HFR).	ECOSE Technology products contain no ingredients listed on the REACH Authorization list, Restriction list or Substances of Very High Concern Candidate list. They are inventoried to at least 0.01% by weight (100ppm) and **certified DECLARE** LBC Red List Free which means no harmful chemical substances[4].
X06. **VOC Restrictions** **2 points**	**X06.2** Restrict VOC Emissions from Furniture, Architectural and Interior Products (like Insulation).	It requires adherence to emission thresholds for materials placed inside the building envelope.	ECOSE Technology products are compliant with the German AgBB Testing and Evaluation Scheme, the higher category (A+) of the French labelling and the Blue Angel. The binder is without added phenol formaldehyde. Products with or without facing are certified for **Indoor Air Comfort Eurofins Gold** and **Blue Angel**.
X07. **Material Transparency** **3 points**	**X07.1** Select product with Disclosed ingredients **X07.2** Select products with Enhanced Ingredient Disclosure **X07.3** Select Products with Third-Party Verified Ingredients	To prioritize supply chain and ingredient transparency in offering product specifiers the tools they need to make fully informed choices when selecting healthier products. This WELL feature requires the compilation and availability of product descriptions, with ingredients evaluated and disclosed through transparency labels.	ECOSE Technology products contain no ingredients listed on the REACH Authorization list, Restriction list or Substances of Very High Concern Candidate list. They are inventoried to at least 0.01% by weight (100ppm) and **certified DECLARE** LBC Red List Free which means no harmful chemical substances.
X08. **Materials Optimization** **2 points**	**X08.1** Promote the selection of products that have been audited to minimize impacts on human and environmental health.	To take precautionary approach to hazards by emphasizing healthy material selection. It requires screening and labeling of products in accordance with programs that restrict the use of hazardous ingredients in materials and products.	ECOSE Technology products contain no ingredients listed on the REACH Authorization list, Restriction list or Substances of Very High Concern Candidate list. They are inventoried to at least 0.01% by weight (100ppm) and **certified DECLARE** LBC Red List Free.

[4] You can view our Declare certificates via this link

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Annex 1 : Acoustic performance

Acoustic performance is one of the essential criteria for determining sustainable and healthy buildings. It is typically defined in building certification systems by three key requirements:

- **Sound insulation**: capacity of a building element (and building system) to minimise sound transmission between interior spaces and reduce noise intrusion from the exterior. It should be maximised according to the building's location and the layout of interior spaces.
- **Building services noise**: level of noise within a room, produced by heating, ventilating and air-conditioning equipment. It should be kept below prescribed limits.
- **Reverberation time**: indicator of a room's capability to enable clear understanding of speech and prevent unwanted acoustic defects (such as echo).

Use of Mineral Wool as one of the key components of various building elements enables compliance with all the acoustic requirements.

Acoustic requirement	Benefits of Knauf Insulation Mineral Wool	Test reports
Sound insulation Design criteria expressed as minimum airborne and impact sound insulation index (STC, DnT,w or L'nT,w)	Mineral Wool increases the sound insulating capacity of basic building elements. It attributes to high noise reducing capacity of façade walls, roofs, interior partitions, floors and ceilings.	**Internal partitions** *60mm Mineral Wool 35* (Rw 63 dB) **Wall linings** *45mm Ultracoustic R* (Rw 67dB) **Floors** *15mm TP-ST* (ΔLw 20 dB)
Building services noise Design criteria expressed as maximum indoor ambient noise level (dB)	Owing to its porous structure, Mineral Wool achieves high levels of sound absorption making it an integral part of HVAC noise reducing devices (sound attenuators, duct liners, cross-talk attenuators).	Sound absorption *100mm TP 138 SP* (αw 1.00)
Reverberation time Design criteria expressed as maximum reverberation time (seconds) or minimum sound absorption coefficient (αw, NRC)	Sound absorbing nature of Mineral Wool aids in controlling the reverberation time of spaces. Mineral Wool is an integral element of acoustic panels and ceiling tiles; or added above ceiling level as highly efficient acoustic absorber.	**https://knauf.com/api/download-center/v1/assets/7a998d11-e3d5-4b22-9bd1-fc6848078e3a?download=true**

The human ear is capable of perceiving sounds between 0 and 130 dB, which defines the difference between a pleasant acoustic environment, discomfort, and even pain. Generally, the human ear cannot detect variances of 1–2 dB. The values below provide an indicative relation between dB and perceived changes in loudness.

Change in dB level	Change in loudness
1-2 dB	Unnoticeable
3 dB	Just noticeable
5 dB	Clearly noticeable
10 dB	Twice as loud (or quiet)
20 dB	Four time as loud (or quiet)