

Tere tulemast

KNAUF INSULATION



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Sales Manager for Baltic's

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Kes me oleme





**Knauf Insulation
tehased**

- MINERALWOLLE
- PUITWOLLE
- LAMINEERIMINE
- TOOTMISKESKUS

+40 aastat kogemust
isolatsiooni tööstuses

37 tootmiskeskust 15 riigis

Iseseisev ja 100% pereettevõte



Meie kliima muutub. Meil on vaja drastiliselt vähendada kasvuhoonetegaaside emissiooni.



Põletada miljardeid hoonete kütmisele ja jahutamisele on lihtsalt raiskamine. Aeg on säästa energiat.



Toornafta ja maagaasi varud ammenduvad. Me peame vähem sõltuma fossiilsetest kütustest ja lõpetama ebaefektiivse ehitamise.

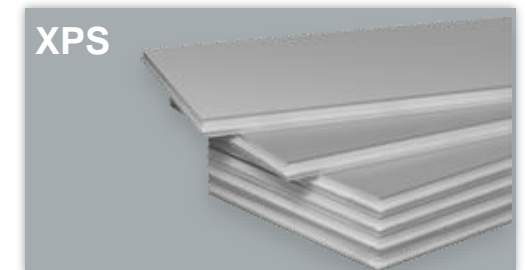
LAHENDUSED



Lai valik soojusisolatsiooni materjale

KNAUFINSULATION

“Sõltumatu nõuanne, mis aitab teil valida oma rakendusele parima võimaliku lahenduse.”



Lahendused

KNAUFINSULATION

KALDKATUSED



PÖÖNING



PUITKONSTRUKTSIOON



SISESEINAD



VENTILEERITUD FASSAAD



LDS AURUTÖKKE SÜSTEEM



PUISTEVILL



MURUKATUSE SÜSTEEM



Kaldkatused Eestis Väljakutsed soojustamisel

Peamised probleemid kaldkatuse soojustamisel

- Külmasillad ja tagatud pole õhutihedus.
- Kallis tööjõud, liiga palju materjali jääke.
- Kuidas saavutada parem soojus- ja heliisolatsioon.
- Vajadus jätkusuutlikuma ja ökoloogilisema toote järele.
- Vajadus täissüsteemsele lahendusele.

Huvitav olukord ?



Vahemaad mõõdetuna [cm]



- Unifit 032 $\lambda=0,032$ [W/mK]
- Unifit 033 $\lambda=0,033$ [W/mK]
- **Unifit 035 $\lambda=0,035$ [W/mK]**
- Unifit 037 $\lambda=0,037$ [W/mK]

UNIFIT 035

Paksus x laius x pikkus
100 x 1200 x 6300 mm

“UNIFIT”

SMART soojustus professionaalidele

Unifit eelised

KNAUFINSULATION



Unifit eelised

KNAUFINSULATION



Unifit eelised

KNAUFINSULATION





Pole vaja kinnitada



Pole vaja kinnitada, nõõrida.

Unifit eelised

KNAUFINSULATION



Vahemaad näidatud [cm]

Mineraalvilla eelised





8,6 m³

Väiksemad tranpordikulud
Väiksemad laokulud

Mineraalvilla eelised

KNAUFINSULATION



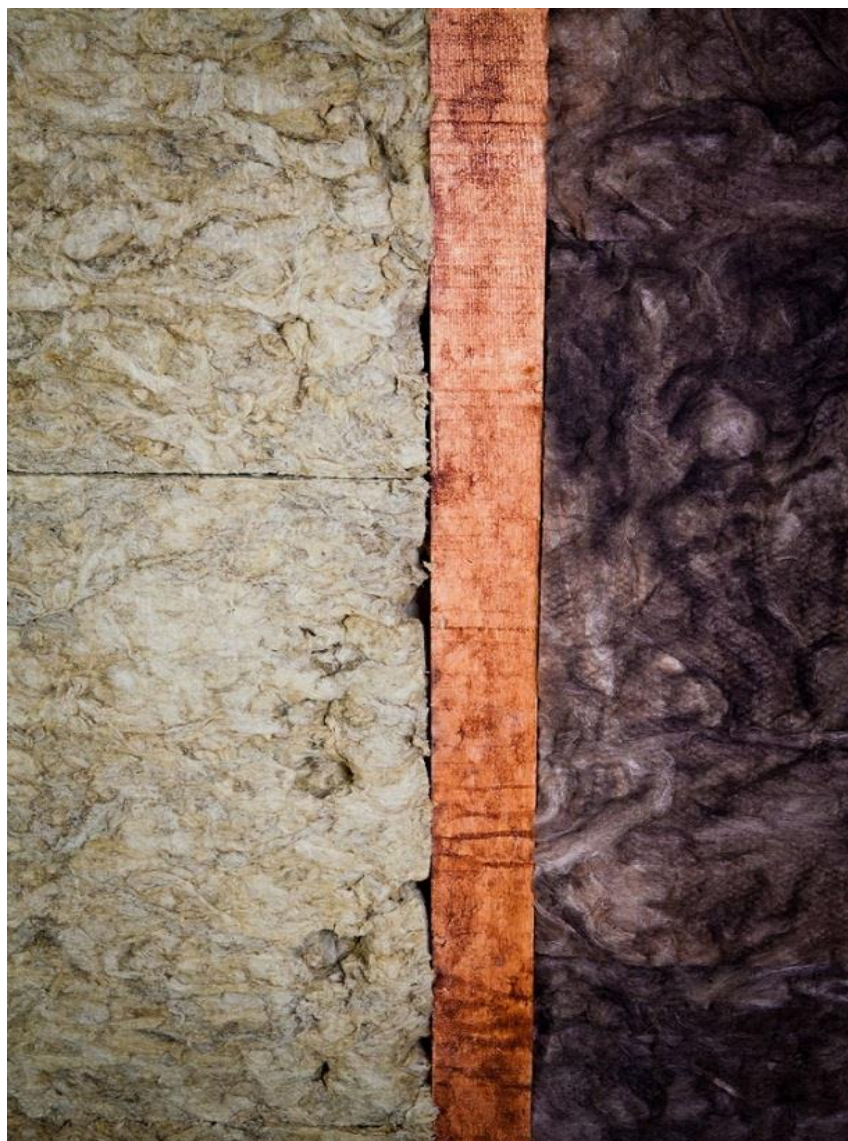
Mineraalvilla eelised

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Mineraalvilla eelised

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Naturaalne mineraalvill

ECOSE® tehnoloogial.



ECOSE® Tehnoloogia? Väljatöötatud 2009. aastal



Tootmistehnoloogia, mis tagab:

- Jätkusuutlik keskkond; 20 % vähem süsinikdioksiidi
- Loodushoid; 80 % taaskasutatavaid materjale
- Energia kokkuhoid; 50 % (uus tehnoloogia)





ECOSE® Tehnoloogia ?

2009. aastal töötati välja uus sideaine, kuhu ei ole lisatud:

- **Formaldehüüde**
- **Fenoole**
- **Akrüüle**





Formaldehüüd ?

Formaldehüüd – keemiline kantserogeen ja allergeen



Cancer

Naturaalne ilma värvaineteta

KNAUFINSULATION



LEED & BREEAM dokumendid





March 2017

BREEAM INTERNATIONAL NEW CONSTRUCTION 2016 PRODUCT DATA FOR CERTIFICATION GLASS MINERAL WOOL ECOSE

BREEAM (Building Research Establishment Environmental Assessment Methodology) International New Construction¹ is a voluntary standard that defines high performance green buildings which are healthier, more environmentally responsible and more profitable structures. Using independent assessors, BREEAM examines criteria covering a range of issues in sections that evaluate: management processes, health and wellbeing, energy, transport, water, materials, waste, land use and ecology, pollution and innovation.

KNAUF INSULATION products can put you on the right track to get the highest result for BREEAM certification.

BREEAM Credit Category code	Assessment criteria and definition	Knauf Insulation Products contribution	Contributes towards
Hea 02 Indoor air quality	Emissions from building products: the insulation materials are one of the 5 product types that needs to meet the emission limits. The following requirements are of application for insulation products: Formaldehyde ≤ 0.06 mg/m ³ ; Total volatile Organic Compounds ≤ 1.0 mg/m ³ ; Carcinogens category 1A and B ≤ 0.001 mg/m ³	Glass Mineral Wool ECOSE products are in compliance with the requirements as without added formaldehyde and certified Eurofins Gold ² for Indoor Air Comfort, see annexe 1. 	1 credit
		Glass Mineral Wool ECOSE products without added formaldehyde and certified Eurofins Gold ² for Indoor Air Comfort are helping to stay at a very low concentration level. 	1 credit
Hea 04 Thermal comfort	To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants.	Thermal modelling can be facilitated through products Building Information Modeling (BIM) files available on line ¹ .	1 credit

¹Technical manual : SD233 – 1.0:2016






March 2017

LEED version 4 PRODUCT DATA FOR CERTIFICATION GLASS MINERAL WOOL WITH ECOSE TECHNOLOGY

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.	ECOSE Technology 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 ECOSE Technology 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 sourced in a responsible manner.	ECOSE Technology Products are manufactured with up to 80% of recycled content (pre and post-consumer) ² .	1 point



with **ECOSE**[®]
TECHNOLOGY



Majatehased

KNAUFINSULATION



**Jätkusuutlik ja ökoloogiline
maja**





Kaldkatus

Energiaklassid

Kaldkatus, pööning

Elumajad - kaldkatus ja külmad pööningud

Soojusjuhtivuse koefitsent U [W/m²K]

Regulatsioon		Tulemus	
Energia klass	U [W/m ² K]	Paksus cm	λ [W/mK]
B (aastast 2014)	0,15	35	0,035 - 0,037
A (aastast 2019)	~ 0,10	40 - 45	0,036 - 0,033

Kaldkatus

“Samm sammult”

■ Samm sammult



25 cm

■ Samm sammult



10 cm

Samm sammult

KNAUFINSULATION



10 cm

Samm sammult

KNAUFINSULATION



Aurutõkke membraan Homeseal LDS 40/ 2 silk

Samm sammult

KNAUFINSULATION



**Tihendusteip
Solifit 1**

Samm sammult

KNAUFINSULATION



Homeseal LDS Solimur

■ Samm sammult



■ Samm sammult



5 cm

Samm sammult

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Mineraalvilla paksus

25 cm

10 cm

5 cm

Kokku: 40 cm

Knauf Insulation UNIFIT sügiskampaania 2019



KAMPAANIA

HOMESEAL™
SYSTEM

KNAUFINSULATION
with **ECOSE™**

Osta UNIFIT mineraalvilla 45m³ ning saad kingituseks HOMESEAL komplekti!

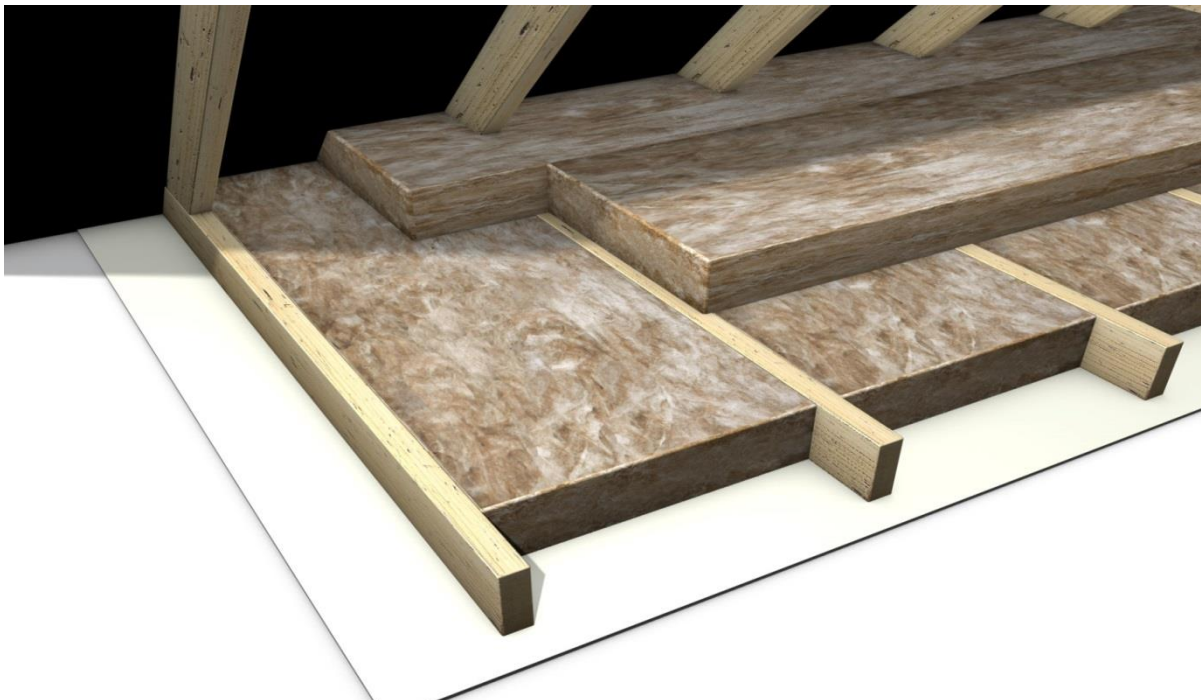
Unifit on ECOSE® tehnoloogia abil valmistatud mineraalvillmatid, mis on ette nähtud kaldkatuste soojustamiseks.

Homeseal komplekt koosneb järgmistest toodetest: aurutõkke kile LDS 40, tihendusteip LDS Solift 1 ning hermeetik LDS Solimur.



Külm pööning

Külma pööning soojustus



Rullid	Soojusjuhtivus koefitsent λ [W/mK)
Naturoll Pro 039	0,039
Naturoll 37	0,037
Naturoll 35	0,035

EFEKTIIVSEMA E HITUSE SOOJUSTUS

KNAUFINSULATION





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