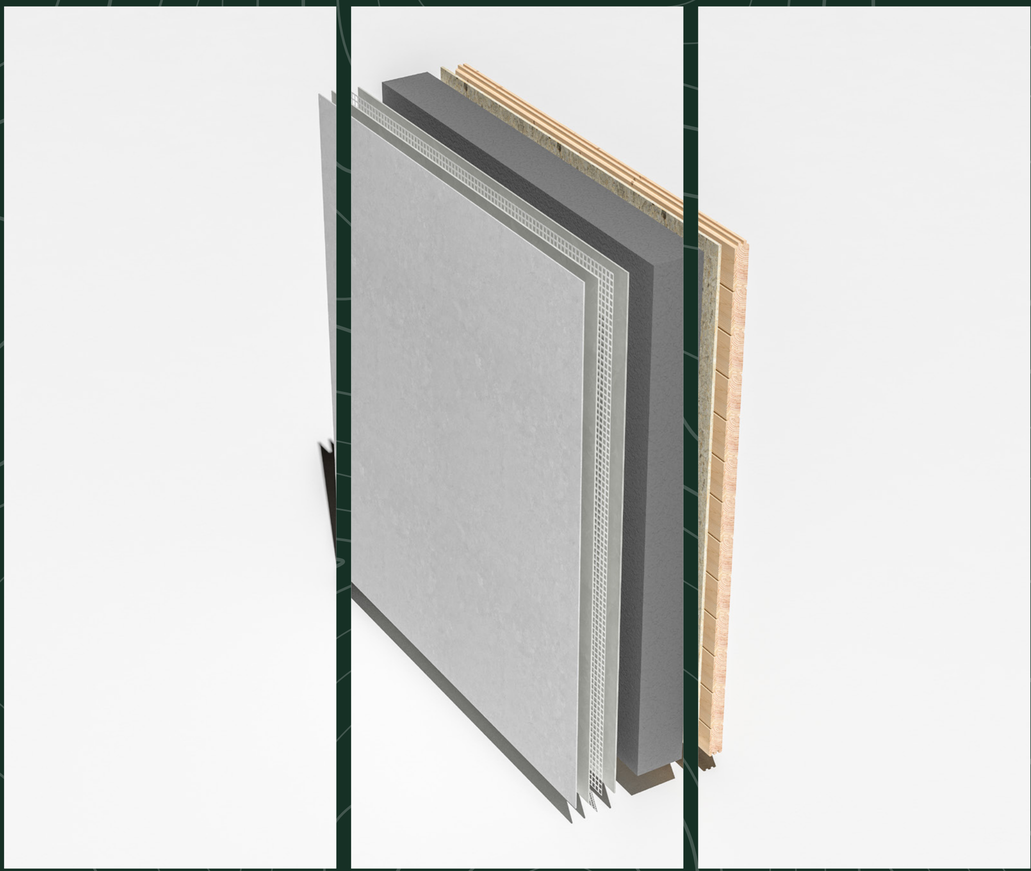


ecobuild
CONSTRUCTION LTD

EPS Insulation

Introduction to Log Cabin EPS Insulation

What is EPS?

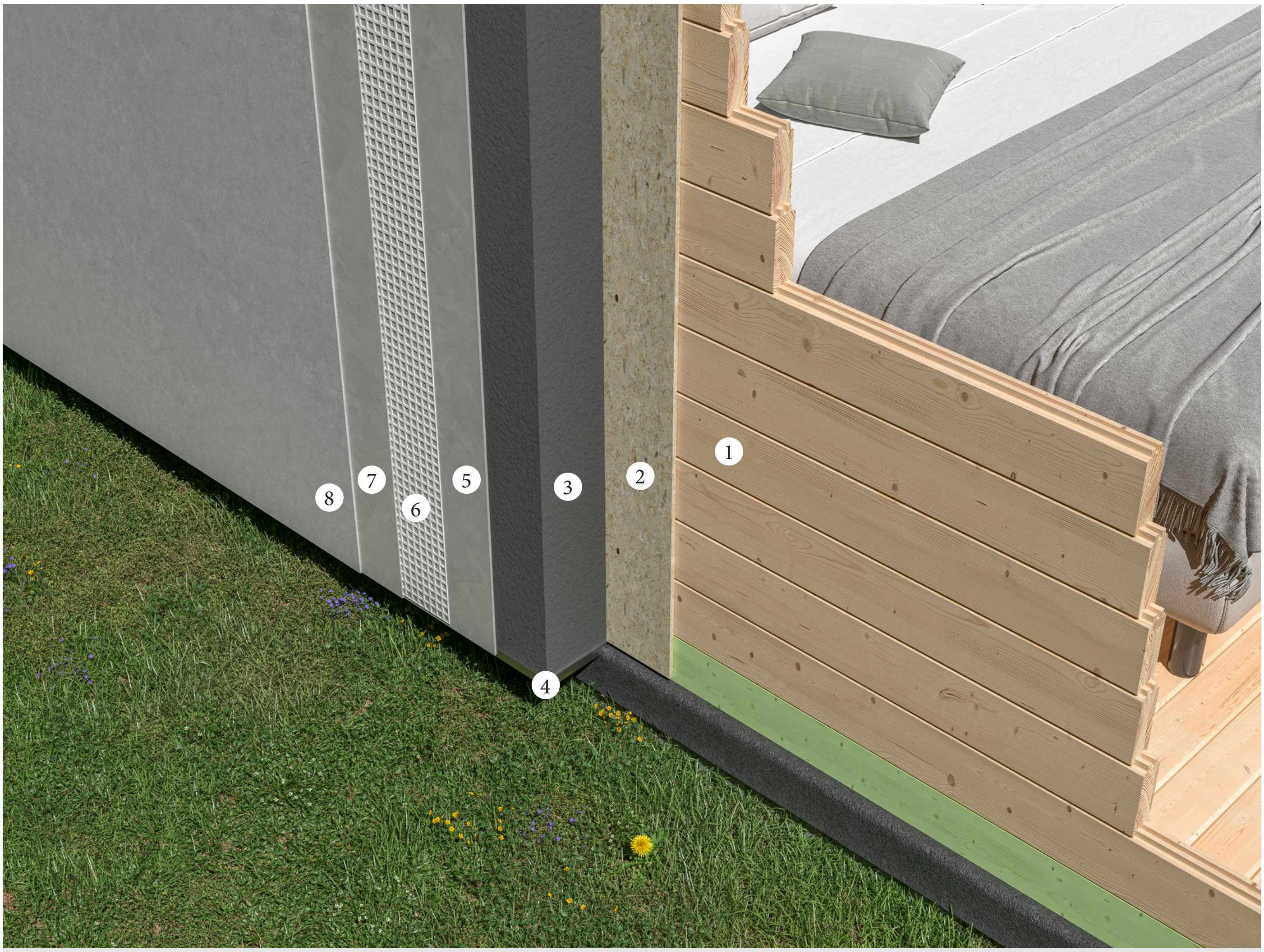
EPS (Expanded Polystyrene) insulation is an excellent choice for enhancing the thermal efficiency and durability of log cabins. Designed to provide superior insulation, EPS helps to maintain a stable indoor temperature, reducing heat loss in winter and preventing overheating in summer. It is lightweight, moisture-resistant, and highly durable, making it an ideal solution for log cabins. The external finish is completed with a high-quality acrylic render, ensuring a weatherproof, attractive, and long-lasting facade.

Advantages of EPS

- **Superior Thermal Performance** – csignificantly reduces heat loss, leading to improved energy efficiency and lower heating costs.
- **Lightweight & Easy to Install** – easy to handle and install, making the insulation process quick and efficient.
- **Moisture & Mold Resistance** – does not absorb water, preventing moisture buildup and the formation of mold or mildew.
- **Durable & Impact-Resistant** – The external acrylic render provides a robust and flexible protective layer, enhancing the longevity of the insulation system.
- **Enhanced Aesthetic Appeal** – The acrylic render finish offers a sleek and modern appearance, available in a variety of colors and textures.
- **Breathability** – EPS insulation allows the cabin to maintain proper airflow, preventing condensation issues while maintaining comfort

Environmental & Safety Data

- **Material:** Expanded Polystyrene (EPS)
- **Density:** Typically 15-25 kg/m³ Thermal Conductivity: ~0.032 – 0.038 W/mK
- **Water Absorption:** < 2%
- **Compressive Strength:** 100-200 kPa
- **Fire Rating:** Class E (can be combined with fire-resistant coatings for enhanced performance)
- **Thickness Options:** Available in 100mm
- **Vapor Permeability:** Allows for proper air circulation to prevent condensation
- **External Finish:** High-performance acrylic render, UV-resistant and weatherproof



Technical Illustration

1 Structural Log
2 OSB Particle Board
3 EPS Insulation
4 EPS Track
5 Adhesive Render Coat
6 Standard Mechcloth
7 Adhesive Render Coat
8 Decorative Render Finish (White)

Acrylic Render Finish

— **Grain Option:** 1.5k (Standard)
— **Color Options:** Acrylic renders can be mixed with a wide range of pigments, providing custom colors. Standard color is white and other color are upgradable options.

All Statements without guarantee

Technical U Value 44mm Structural Log

Thermal protection

U = 0,20 W/(m²K)

GEG 2020/24 Bestand*: U<0,24 W/(m²K)

excellent insufficient

Moisture proofing

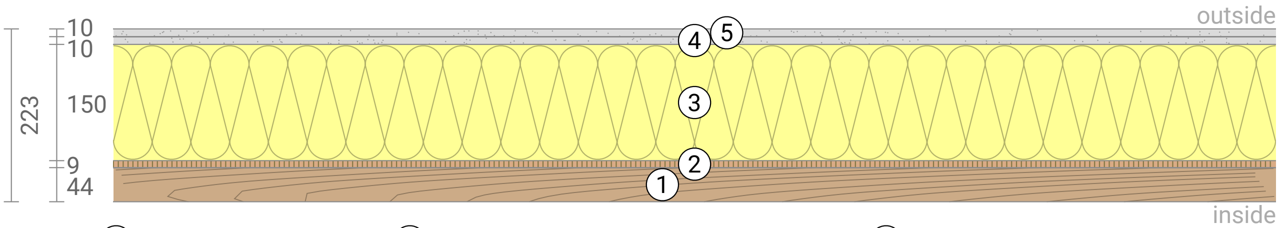
Condensate: 124 g/m²
Dries 11 days
Drying reserve: 927 g/m²a

excellent insufficient

Heat protection

Temperature amplitude damping: 14
phase shift: 8,0 h
Thermal capacity inside: 41 kJ/m²K

excellent insufficient



(1) Spruce (44 mm)
(2) OSB (9 mm)
(3) Insulation/Polystyrene (150 mm)
(4) Baumit Starcontact XS (10 mm)
(5) Baumit SilikonTop (10 mm)

U-Value calculation according to DIN EN ISO 6946

#	Material	Dicke [cm]	λ [W/mK]	R [m²K/W]
	Thermal contact resistance inside (Rsi)0			,130
1	Spruce	4,40	0,130	0,338
2	OSB	0,90	0,130	0,069
3I	nsulation/Polystyrene (EPS 035)	15,00	0,035	4,286
4	Baumit Starcontact XS	1,00	0,820	0,012
5	Baumit SilikonTop	1,00	0,700	0,014
	Thermal contact resistance outside (Rse)			0,040

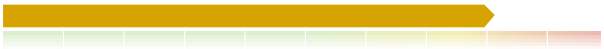
Thermal contact resistances have been taken from DIN 6946 Table 7.
Rsi: heat flow direction horizontally
Rse: heat flow direction horizontally, outside: Direct contact to outside air

Thermal resistance R_{tot} = 4,890 m²K/W

Heat transfer coefficient U = 1/R_{tot} = **0,20 W/(m²K)**

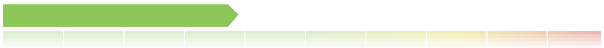
LCA

Heat loss: 16 kWh/m² per heating season



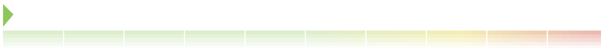
Amount of heat that escapes through one square meter of this component during the heating period. Please note: Due to internal and solar gains, the heating demand is lower than the heat loss.

Primary energy (non renewable): >130 kWh/m²



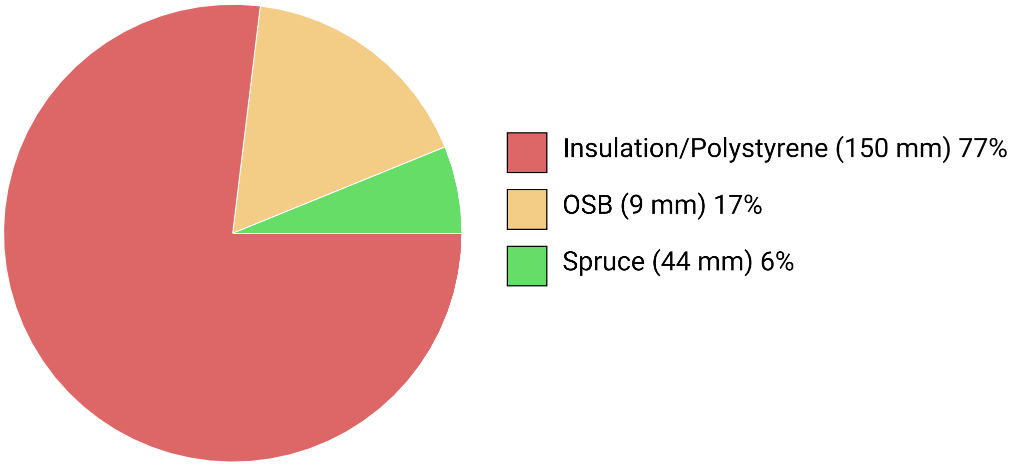
Non-renewable primary energy (= energy from fossil fuels and nuclear energy) that was used to produce the new building materials ("cradle to gate").

Green house gas potential: -24 (?) kg CO_2 Äqv./m²

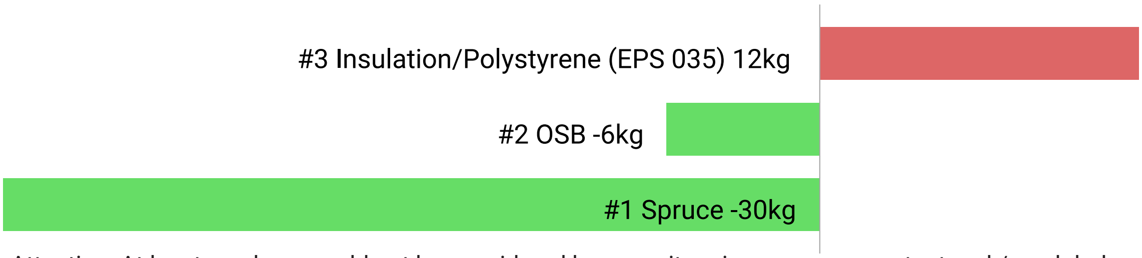


For the production of the building materials used, more greenhouse gases were withdrawn from the atmosphere than emitted.

Composition of non-renewable primary energy of production:

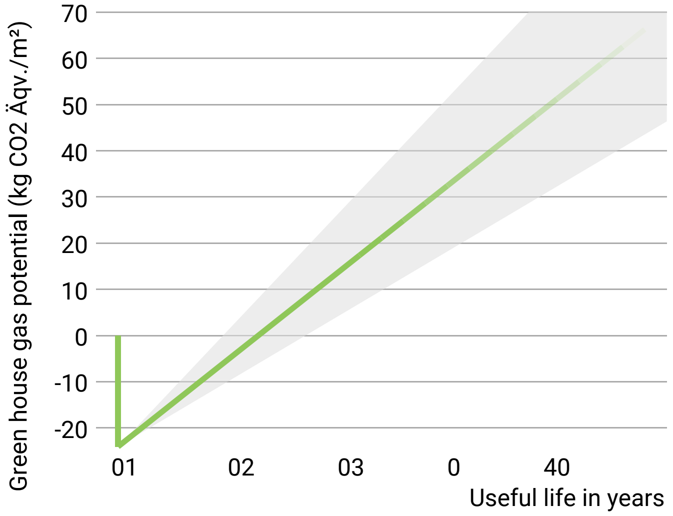


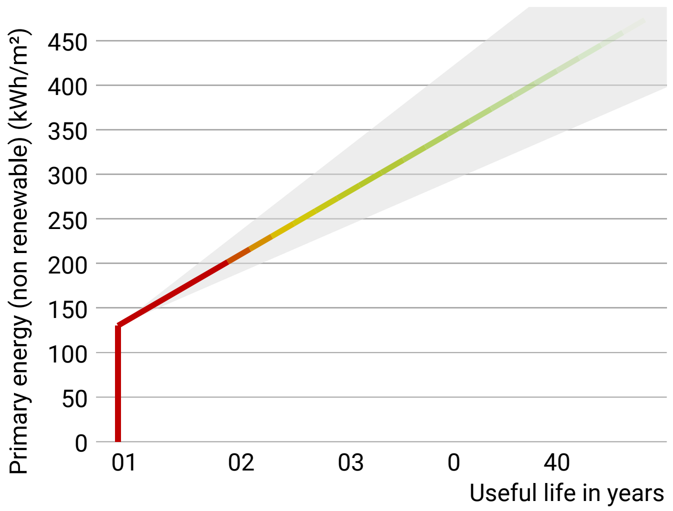
Composition of the greenhouse potential of production:



Attention: At least one layer could not be considered because its primary energy content and / or global warming potential is unknown.

Global warming potential and primary energy for construction and use





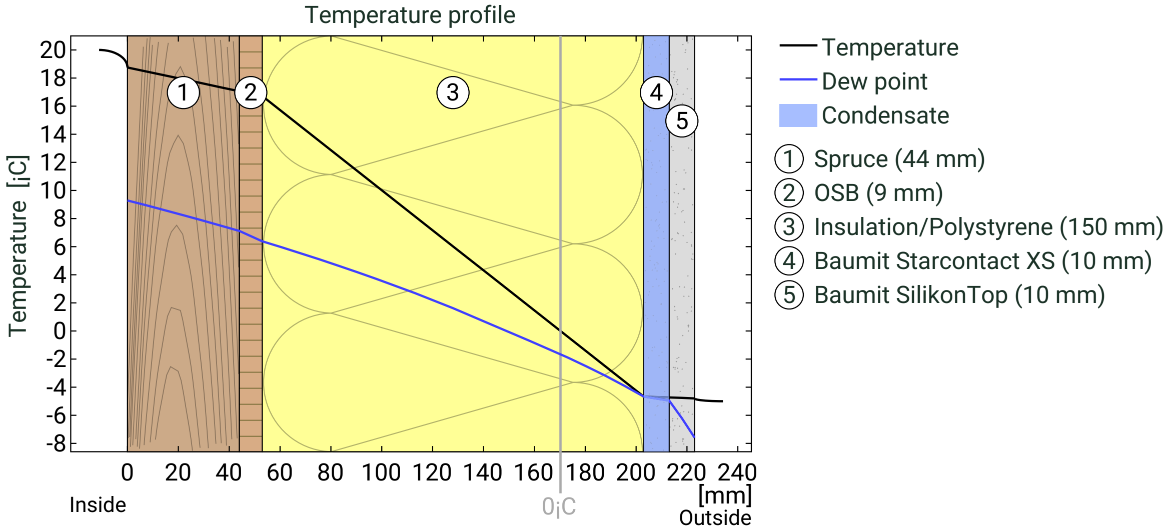
The **left figure** shows the global warming potential of the production of the component in the vertical part of the curve. Greenhouse gas emissions (through heating) arising during use of the building are indicated by the upward curve.

The **figure at the bottom left** shows the non-renewable primary energy expenditure for the production of the component in the vertical part of the curve. The primary energy required during use of the building (through heating) is represented by the upward curve.

The longer the component is used unchanged, the more environmentally friendly it is, because the production costs contribute less to the total emissions (indicated by the color of the curve).

Due to unknown solar and internal gains, the heating demand can only be estimated. Accordingly, primary energy consumption and global warming potential during the use phase are only vaguely known. For the estimation it was assumed that solar and internal profits contribute with 4 kWh/a/m² component area. The light gray area indicates the area in which the curve is located with great certainty. For heat generation, a primary energy input of 0,60 kWh per kWh of heat and a global warming potential of 0,16 kg CO_2 eqv/m² per kWh of heat was used. Heat source: Heat pump (air-water).

Temperature profile



Temperature and dew-point temperature in the component. The dew-point indicates the temperature, at which water vapour condensates. As long as the temperature of the component is everywhere above the dew-point temperature, no condensation occurs. If the curves have contact, condensation occurs at the corresponding position.

Layers (from inside to outside)

#		Material	λ [W/mK]	R [m²K/W]	Temperatur [¡C] min	max	Weight [kg/m²]
		Thermal contact resistance*		0,250	18,8	20,0	
1	4,4 cm	Spruce	0,130	0,338	17,1	18,8	19,8
2	0,9 cm	OSB	0,130	0,069	16,7	17,1	5,9
3	15 cm	Insulation/Polystyrene (EPS 035)	0,035	4,286	-4,7	16,7	4,5
4	1 cm	Baumit Starcontact XS	0,820	0,012	-4,7	-4,7	12,5
5	1 cm	Baumit SilikonTop	0,700	0,014	-4,8	-4,7	18,0
		Thermal contact resistance*		0,040	-5,0	-4,8	
	22,3 cm	Whole component		4,890			60,7

*Thermal contact resistances according to DIN 4108-3 for moisture protection and temperature profile. The values for the U-value calculation can be found on the page 'U-value calculation'.

Surface temperature inside (min / average / max):	18,8¡C	18,8¡C	18,8¡C
Surface temperature outside (min / average / max):	-4,8¡C	-4,8¡C	-4,8¡C

Moisture proofing

For the calculation of the amount of condensation water, the component was exposed to the following constant climate for 90 days: inside: 20¡C und 50% Humidity; outside: -5¡C und 80% Humidity. This climate complies with DIN 4108-3.

Under these conditions, a total of 0,12 kg of condensation water per square meter is accumulated.This quantity dries in summer in 11 days (Drying season according to DIN 4108-3:2018-10).

Drying reserve according to DIN 4108-3:2018: 927 g/(m²a)
At least required by DIN 68800-2: 100 g/(m²a)

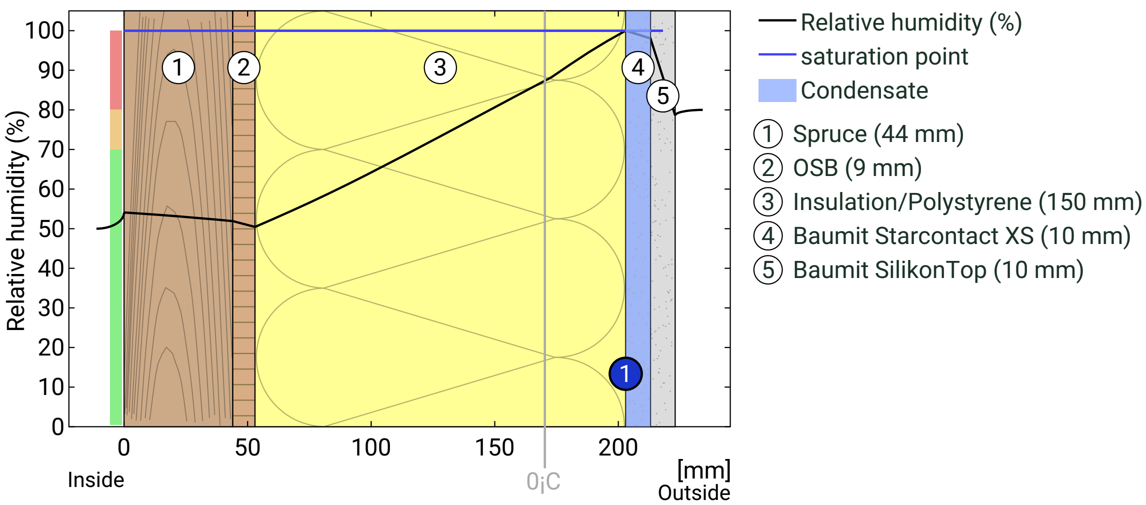
#		Material	sd-value [m]	Condensate [kg/m²]	Condensate [Gew.-%]	Weight [kg/m²]
1	4,4 cm	Spruce	0,88	-	-	19,8
2	0,9 cm	OSB	0,27	-	-	5,9
3	15 cm	Insulation/Polystyrene (EPS 035)	3,00	0,12		4,5
4	1 cm	Baumit Starcontact XS	0,10	0,12		12,5
5	1 cm	Baumit SilikonTop	0,80	-		18,0
	22,3 cm	Whole component	5,05	0,12		60,7

Condensation areas

(1) Condensate: 0,12 kg/m² Affected layers: Baumit Starcontact XS, Insulation/Polystyrene (EPS 035)

Humidity

The temperature of the inside surface is 18,8 ¡C leading to a relative humidity on the surface of 54%.Mould formation is not expected under these conditions.
The following figure shows the relative humidity inside the component.



Notes: Calculation using the Ubakus 2D-FE method. Convection and the capillarity of the building materials were not considered. The drying time may take longer under unfavorable conditions (shading, damp / cool summers) than calculated here.

Moisture protection in accordance with DIN 4108-3:2018 Appendix A

This moisture proofing is only valid for **non-air-conditioned** residential buildings.

Please note the hints at the end of these moisture proofing calculations.

#		Material	λ [W/mK]	R [m²K/W]	sd [m]	ρ [kg/m³]	T [¡C]	ps [Pa]	·sd [m]
		Thermal contact resistance		0,250					
1	4,4 cm	Spruce	0,130	0,338	0,88	450	18,75	2163	0
2	0,9 cm	OSB	0,130	0,069	0,27	650	17,06	1945	0,88
3	15 cm	Insulation/Polystyrene (EPS 035)	0,035	4,286	3	30	16,72	1903	1,15
4	1 cm	Baumit Starcontact XS	0,820	0,012	0,1	1250	-4,67	413	4,15
5	1 cm	Baumit SilikonTop	0,700	0,014	0,8	1800	-4,73	411	4,25
		Thermal contact resistance		0,040			-4,80	408	5,05

Temperature (T), vapor saturation pressure (ps), and the sum of the sd-values (Σsd) apply to the layer boundary.

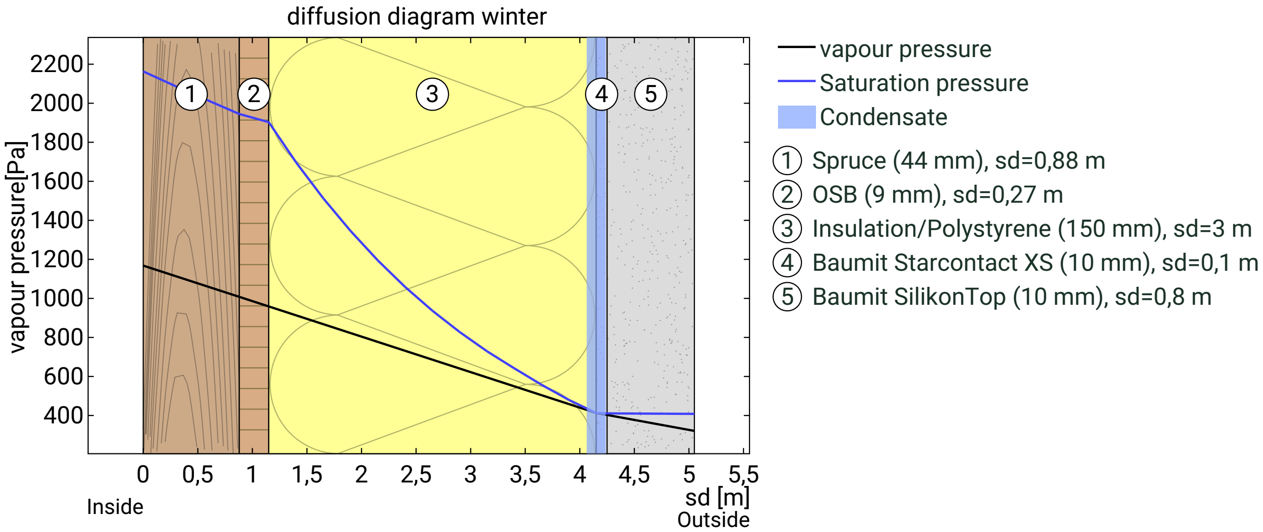
Relative air humidity on the surface

The relative humidity on the interior surface is 54%. Requirements for the prevention of building material corrosion depend on material and coating and have not been investigated.

✓

Dew period (winter)

Boundary conditions	
Vapor pressure inside at 20¡C and 50% humidity	pi = 1168 Pa
Vapor pressure outside at -5¡C and 80% humidity	pe = 321 Pa
Duration of condensation period (90 days)	tc = 7776000 s
Water vapor diffusion coefficient in static air	δ0 = 2.0E-10 kg/(m*s*Pa)
sd-value (Whole component.)	sde = 5,05 m



Condensation area c_1: Layer boundary between Insulation/Polystyrene (EPS 035) and Baumit Starcontact XS at sd_{c1}=4,15 m; p_{c1}=413 Pa; x1=20,3 cm

Condensate amount: $Mc = tc * \delta 0 * ((p_i - p_{c1})/sd_{c1} - (p_{c1} - p_e)/(sd_e - sd_{c1}))$ = **0,124 kg/m²**

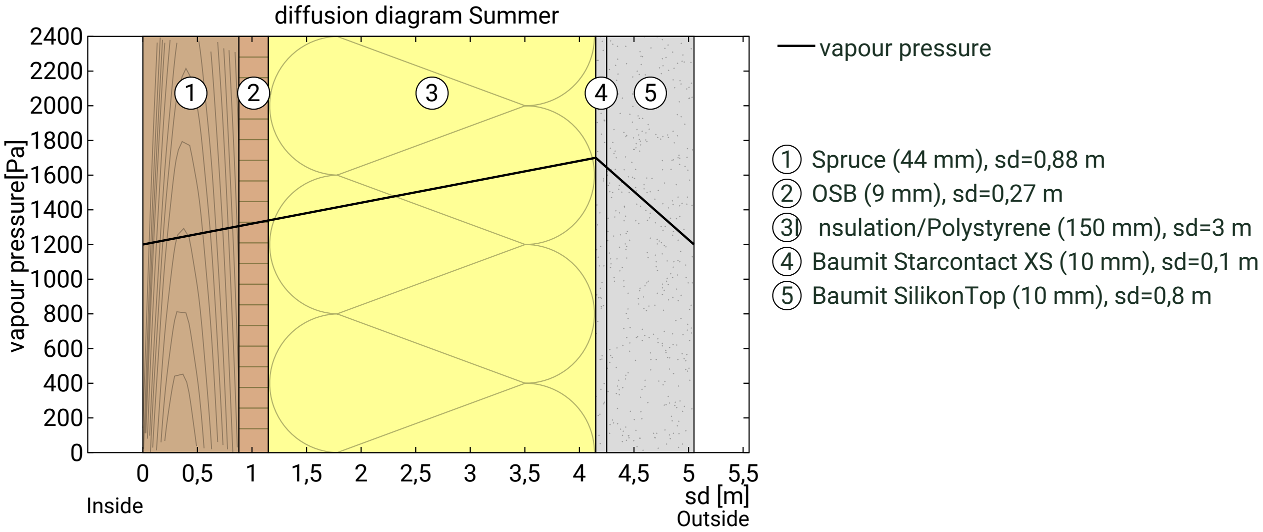
Insulation/Polystyrene (EPS 035) wird als nicht wasseraufnahmefŠhig eingestuft weil Aw < 0.1 ist.
FŸr Schicht Baumit Starcontact XS wurde noch kein Wasseraufnahmekoeffizient hinterlegt. Es wird deshalb angenommen, dass mindestens eine Schicht nicht kapillar wasseraufnahmefŠhig ist.

At least one moistened layer is not classified as water absorptive. The maximum allowed amount of condensation water is therefore 0.5 kg/m².
Total amount of condensate: Mc = **0,124 kg/m²**

✓

Evaporation period (summer)

Boundary conditions	
Interior vapor pressurep	i = 1200 Pa
Exterior vapor pressure	pe = 1200 Pa
Saturation vapour pressure in the condensation area	ps = 1700 Pa
Length of drying season (90 days)	tev = 7776000 s
sd-values remain unchanged.	



Maximum possible evaporation mass
Mev = tc * δ0 * ((ps-pi)/sd_{c1} + (ps-pe)/(sd_e-sd_{c1})) = **1,051 kg/m²**
The condensation amount of 0,124 kg/m² can dry completely.

✓

Drying reserve (DIN 68800-2)

Drying reserve: Mr = (Mev - Mc) * 1000 = **927 g/m²/a**
Minimum requested for walls and ceilings: 100 g/m²/a

✓

Evaluation according to DIN 4108-3

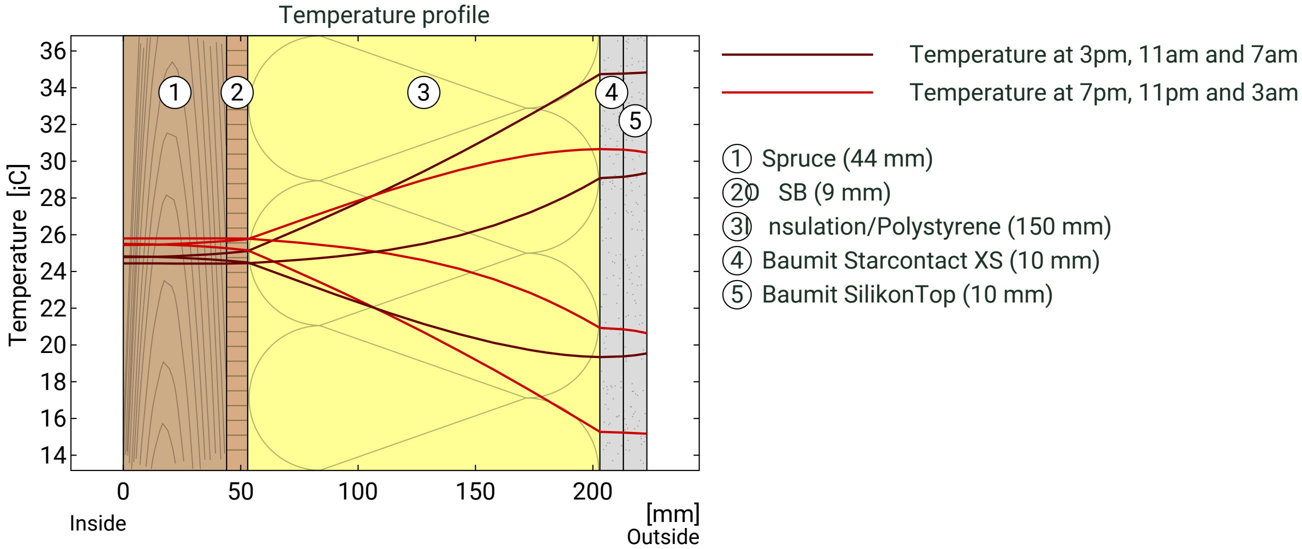
The component is permissible regarding the moisture protection.

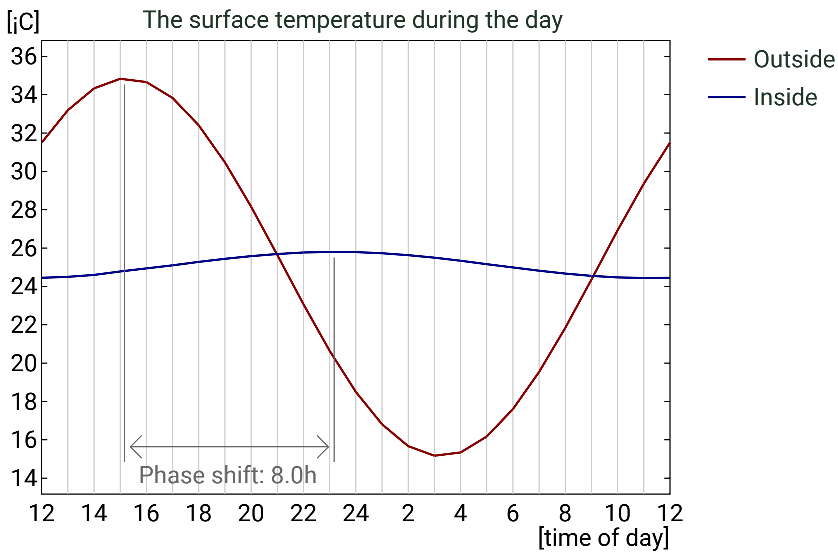
Hints

DIN 4108-3 describes in Section 5.3 components for which no moisture proofing is required as there is no risk of condensation water or the method is not suitable for the assessment. It is not possible to assess whether the component under test is underneath.

Heat protection

The following results are properties of the tested component alone and do not make any statement about the heat protection of the entire room:





Top: Temperature profile within the component at different times. From top to bottom, brown lines: at 3 pm, 11 am and 7 am and red lines at 7 pm , 11 pm and 3 am.
Bottom: Temperature on the outer (red) and inner (blue) surface in the course of a day. The arrows indicate the location of the temperature maximum values . The maximum of the inner surface temperature should preferably occur during the second half of the night.

Phase shift*	8,0 h	Heat storage capacity (whole component):	76 kJ/m²K
Amplitude attenuation **	14,4	Thermal capacity of inner layers:	41 kJ/m²K
TAV ***	0,069		

* The phase shift is the time in hours after which the temperature peak of the afternoon reaches the component interior.
** The amplitude attenuation describes the attenuation of the temperature wave when passing through the component. A value of 10 means that the temperature on the outside varies 10x stronger than on the inside, e.g. outside 15-35 ¡C, inside 24-26 ¡C.
*** The temperature amplitude ratio TAV is the reciprocal of the attenuation: TAV = 1 / amplitude attenuation

Note: The heat protection of a room is influenced by several factors, but essentially by the direct solar radiation through windows and the total amount of heat storage capacity (including floor, interior walls and furniture). A single component usually has only a very small influence on the heat protection of the room.

Technical U Value 66mm Structural Log

Thermal protection

U = 0,20 W/(m²K)

GEG 2020/24 Bestand*: U<0,24 W/(m²K)

excellent insufficient

Moisture proofing

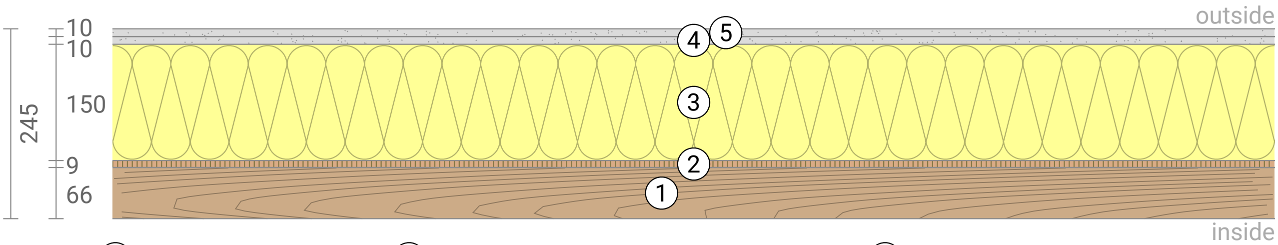
Dries 9 days
Condensate: 98 g/m²
Drying reserve: 937 g/m²a

excellent insufficient

Heat protection

Temperature amplitude damping: 20
phase shift: 8,8 h
Thermal capacity inside: 55 kJ/m²K

excellent insufficient



(1) Spruce (66 mm)
(2) OSB (9 mm)
(3) Insulation/Polystyrene (150 mm)
(4) Baumit Starcontact XS (10 mm)
(5) Baumit SilikonTop (10 mm)

U-Value calculation according to DIN EN ISO 6946

#M	aterialD	icke [cm]	λ [W/mK]	R [m²K/W]
	Thermal contact resistance inside (Rsi)0			,130
1	Spruce 6	,600	,130	0,508
2	OSB	0,90	0,130	0,069
3I	nsulation/Polystyrene (EPS 035)	15,00	0,035	4,286
4	Baumit Starcontact XS	1,00	0,820	0,012
5	Baumit SilikonTop	1,00	0,700	0,014
	Thermal contact resistance outside (Rse)			0,040

Thermal contact resistances have been taken from DIN 6946 Table 7.
Rsi: heat flow direction horizontally
Rse: heat flow direction horizontally, outside: Direct contact to outside air

Thermal resistance R_{tot} = 5,059 m²K/W

Heat transfer coefficient U = 1/R_{tot} = **0,20 W/(m²K)**

LCA

Heat loss: 15 kWh/m^2 per heating season

Amount of heat that escapes through one square meter of this component during the heating period. Please note: Due to internal and solar gains, the heating demand is lower than the heat loss.

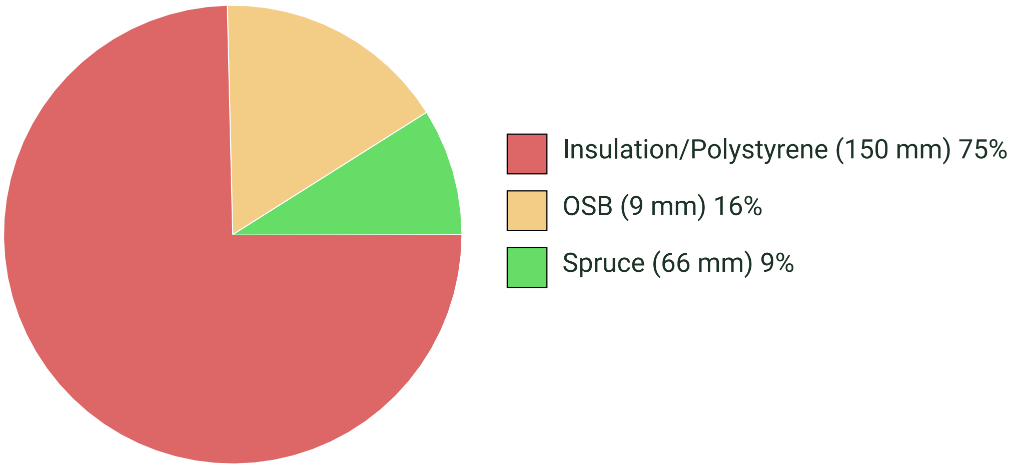
Primary energy (non renewable): >134 kWh/m^2

Non-renewable primary energy (= energy from fossil fuels and nuclear energy) that was used to produce the new building materials ("cradle to gate").

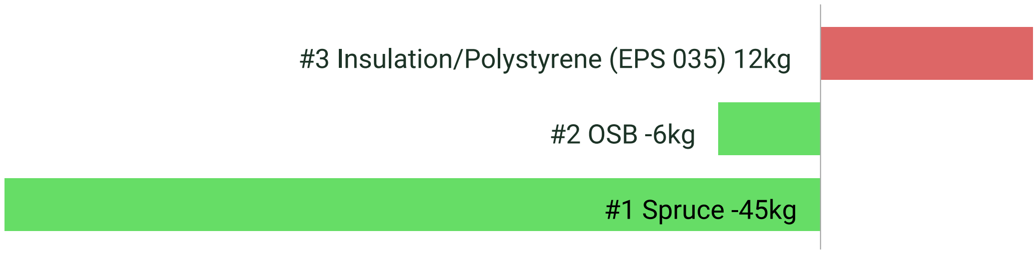
Green house gas potential: -39 (?) kg CO_2 Äqv./m^2

For the production of the building materials used, more greenhouse gases were withdrawn from the atmosphere than emitted.

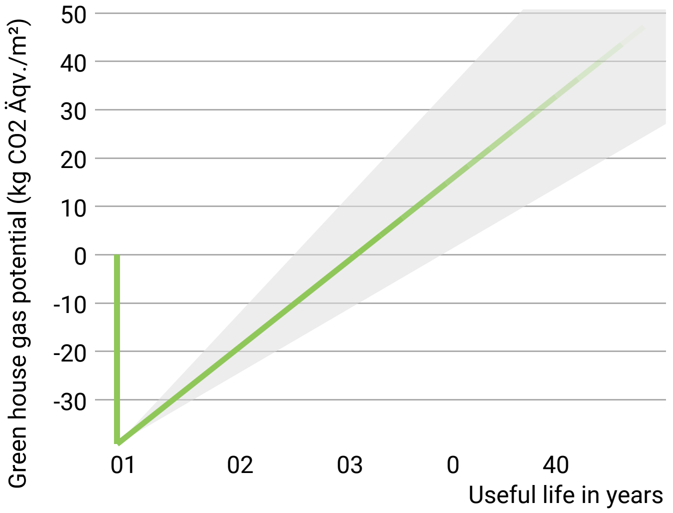
Composition of non-renewable primary energy of production:



Composition of the greenhouse potential of production:



Global warming potential and primary energy for construction and use



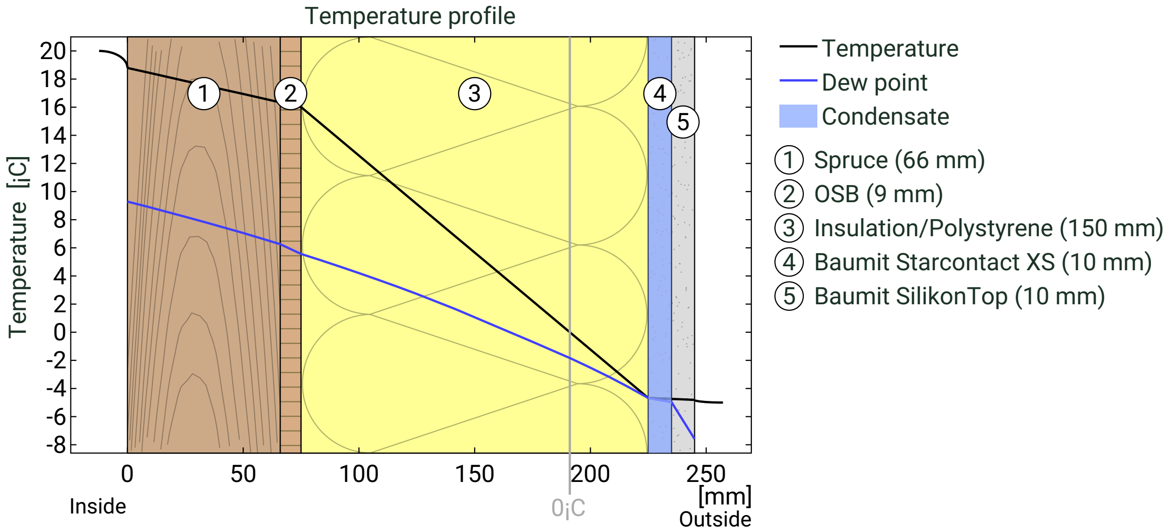
The **left figure** shows the global warming potential of the production of the component in the vertical part of the curve. Greenhouse gas emissions (through heating) arising during use of the building are indicated by the upward curve.

The **figure at the bottom left** shows the non-renewable primary energy expenditure for the production of the component in the vertical part of the curve. The primary energy required during use of the building (through heating) is represented by the upward curve.

The longer the component is used unchanged, the more environmentally friendly it is, because the production costs contribute less to the total emissions (indicated by the color of the curve).

Due to unknown solar and internal gains, the heating demand can only be estimated. Accordingly, primary energy consumption and global warming potential during the use phase are only vaguely known. For the estimation it was assumed that solar and internal profits contribute with 4 kWh/a/m² component area. The light gray area indicates the area in which the curve is located with great certainty. For heat generation, a primary energy input of 0,60 kWh per kWh of heat and a global warming potential of 0,16 kg CO_2 eqv/m² per kWh of heat was used. Heat source: Heat pump (air-water).

Temperature profile



Temperature and dew-point temperature in the component. The dew-point indicates the temperature, at which water vapour condensates. As long as the temperature of the component is everywhere above the dew-point temperature, no condensation occurs. If the curves have contact, condensation occurs at the corresponding position.

Layers (from inside to outside)

#		Material	λ [W/mK]	R [m^2K/W]	Temperatur [¡C] min	max	Weight [kg/m^2]
		Thermal contact resistance*		0,250	18,8	20,0	
1	6,6 cm	Spruce	0,130	0,508	16,3	18,8	29,7
2	0,9 cm	OSB	0,130	0,069	16,0	16,3	5,9
3	15 cm	Insulation/Polystyrene (EPS 035)	0,035	4,286	-4,7	16,0	4,5
4	1 cm	Baumit Starcontact XS	0,820	0,012	-4,7	-4,7	12,5
5	1 cm	Baumit SilikonTop	0,700	0,014	-4,8	-4,7	18,0
		Thermal contact resistance*		0,040	-5,0	-4,8	
	24,5 cm	Whole component		5,059			70,6

*Thermal contact resistances according to DIN 4108-3 for moisture protection and temperature profile. The values for the U-value calculation can be found on the page 'U-value calculation'.

Surface temperature inside (min / average / max):	18,8¡C	18,8¡C	18,8¡C
Surface temperature outside (min / average / max):	-4,8¡C	-4,8¡C	-4,8¡C

Moisture proofing

For the calculation of the amount of condensation water, the component was exposed to the following constant climate for 90 days: inside: 20¡C und 50% Humidity; outside: -5¡C und 80% Humidity. This climate complies with DIN 4108-3.

Under these conditions, a total of 0,098 kg of condensation water per square meter is accumulated.This quantity dries in summer in 9 days (Drying season according to DIN 4108-3:2018-10).

Drying reserve according to DIN 4108-3:2018: 937 g/(m²a)
At least required by DIN 68800-2: 100 g/(m²a)

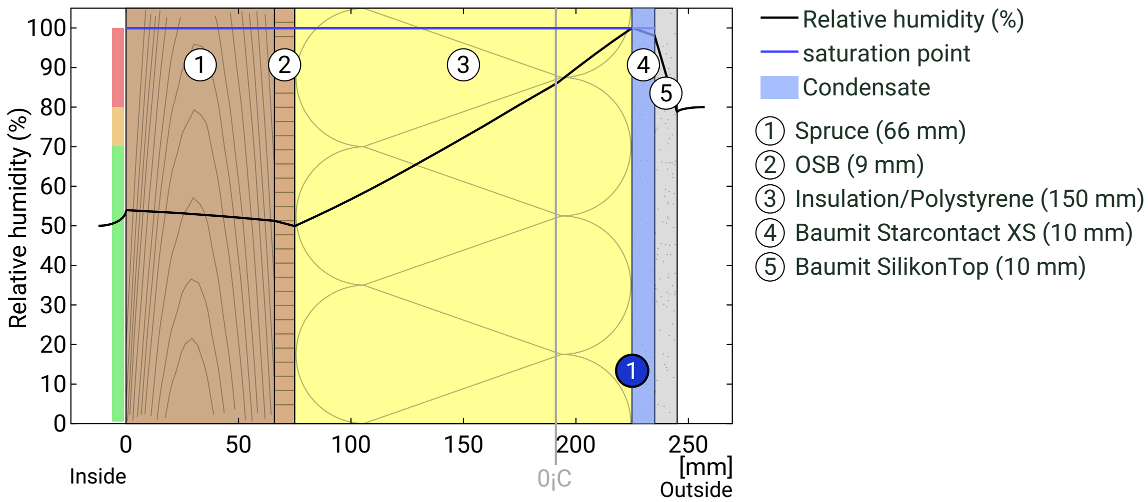
#		Material	sd-value [m]	Condensate [kg/m²]	Condensate [Gew.-%]	Weight [kg/m²]
1	6,6 cm	Spruce	1,32	-	-	29,7
2	0,9 cm	OSB	0,27	-	-	5,9
3	15 cm	Insulation/Polystyrene (EPS 035)	3,00	0,098		4,5
4	1 cm	Baumit Starcontact XS	0,10	0,098		12,5
5	1 cm	Baumit SilikonTop	0,80	-		18,0
	24,5 cm	Whole component	5,49	0,098		70,6

Condensation areas

1 Condensate: 0,098 kg/m² Affected layers: Baumit Starcontact XS, Insulation/Polystyrene (EPS 035)

Humidity

The temperature of the inside surface is 18,8 ¡C leading to a relative humidity on the surface of 54%.Mould formation is not expected under these conditions.
The following figure shows the relative humidity inside the component.



Notes: Calculation using the Ubakus 2D-FE method. Convection and the capillarity of the building materials were not considered. The drying time may take longer under unfavorable conditions (shading, damp / cool summers) than calculated here.

Moisture protection in accordance with DIN 4108-3:2018 Appendix A

This moisture proofing is only valid for **non-air-conditioned** residential buildings.

Please note the hints at the end of these moisture proofing calculations.

#		Material	λ [W/mK]	R [m²K/W]	sd [m]	ρ [kg/m³]	T [¡C]	ps [Pa]	·sd [m]
		Thermal contact resistance		0,250					
1	6,6 cm	Spruce	0,130	0,508	1,32	450	18,79	2168	0
2	0,9 cm	OSB	0,130	0,069	0,27	650	16,34	1858	1,32
3	15 cm	Insulation/Polystyrene (EPS 035)	0,035	4,286	3	30	16,01	1818	1,59
4	1 cm	Baumit Starcontact XS	0,820	0,012	0,1	1250	-4,68	413	4,59
5	1 cm	Baumit SilikonTop	0,700	0,014	0,8	1800	-4,74	410	4,69
		Thermal contact resistance		0,040			-4,81	408	5,49

Temperature (T), vapor saturation pressure (ps), and the sum of the sd-values (Σsd) apply to the layer boundary.

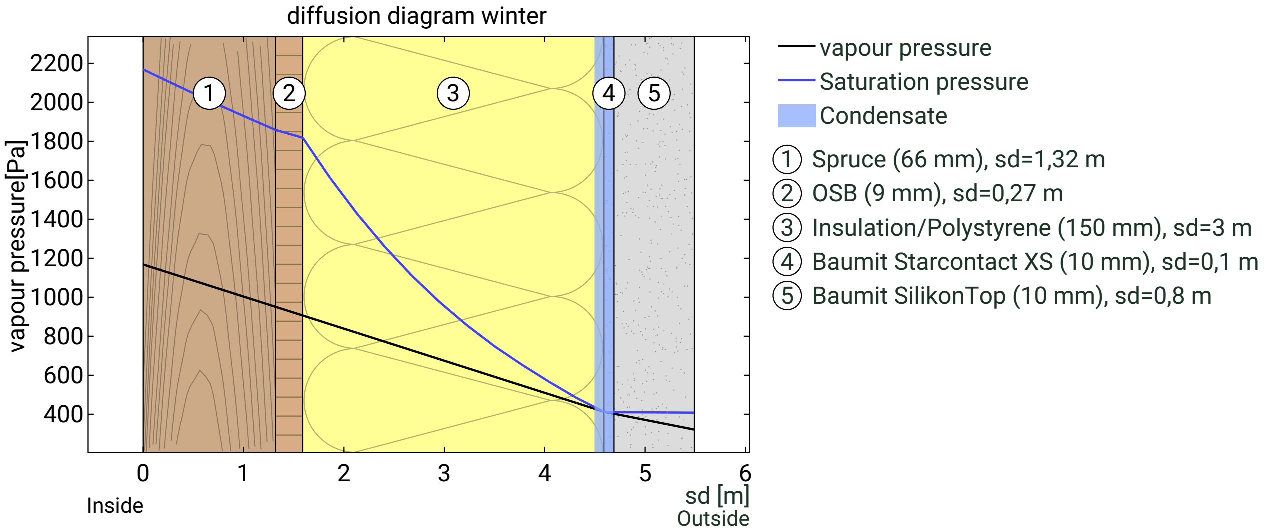
Relative air humidity on the surface

The relative humidity on the interior surface is 54%. Requirements for the prevention of building material corrosion depend on material and coating and have not been investigated.

✓

Dew period (winter)

Boundary conditions	
Vapor pressure inside at 20¡C and 50% humidity	pi = 1168 Pa
Vapor pressure outside at -5¡C and 80% humidity	pe = 321 Pa
Duration of condensation period (90 days)	tc = 7776000 s
Water vapor diffusion coefficient in static air	δ0 = 2.0E-10 kg/(m*s*Pa)
sd-value (Whole component.)	sde = 5,49 m



Condensation area c_1: Layer boundary between Insulation/Polystyrene (EPS 035) and Baumit Starcontact XS at sd_{c1}=4,59 m; p_{c1}=413 Pa; x1=22,5 cm

Condensate amount: $Mc = tc * \delta 0 * ((p_i - p_{c1})/sd_{c1} - (p_{c1} - p_e)/(sd_e - sd_{c1}))$ = **0,097 kg/m²**

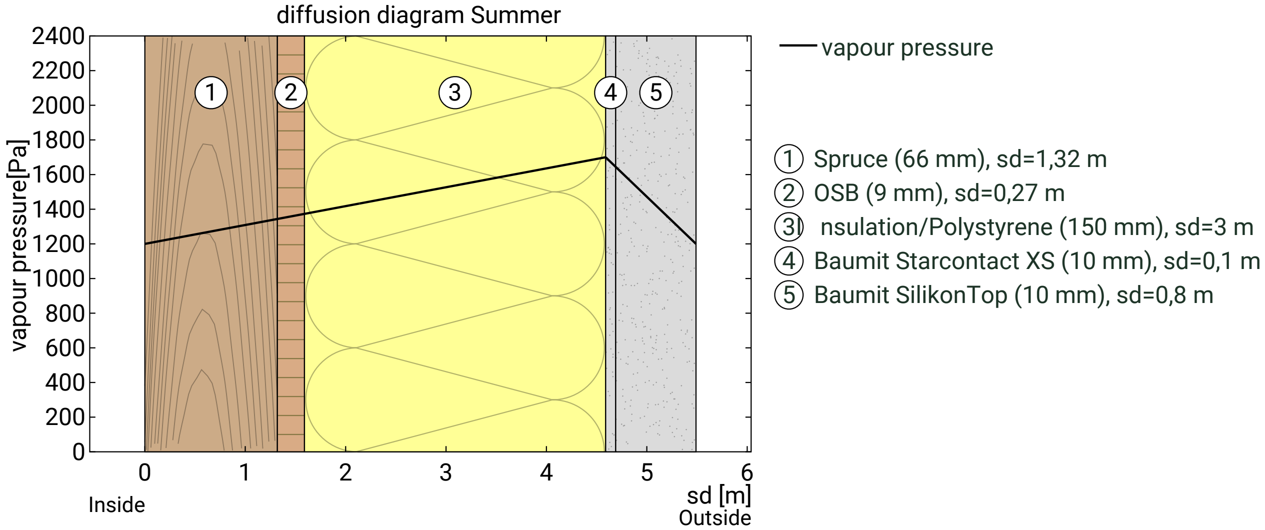
Insulation/Polystyrene (EPS 035) wird als nicht wasseraufnahmefŠhig eingestuft weil Aw < 0.1 ist.
FŸr Schicht Baumit Starcontact XS wurde noch kein Wasseraufnahmekoeffizient hinterlegt. Es wird deshalb angenommen, dass mindestens eine Schicht nicht kapillar wasseraufnahmefŠhig ist.

At least one moistened layer is not classified as water absorptive. The maximum allowed amount of condensation water is therefore 0.5 kg/m².
Total amount of condensate: Mc = **0,097 kg/m²**

✓

Evaporation period (summer)

Boundary conditions	
Interior vapor pressurep	i = 1200 Pa
Exterior vapor pressure	pe = 1200 Pa
Saturation vapour pressure in the condensation area	ps = 1700 Pa
Length of drying season (90 days)	tev = 7776000 s
sd-values remain unchanged.	



Maximum possible evaporation mass
Mev = tc * δ0 * ((ps-pi)/sd_{c1} + (ps-pe)/(sd_e-sd_{c1})) = **1,033 kg/m²**
The condensation amount of 0,097 kg/m² can dry completely.

✓

Drying reserve (DIN 68800-2)

Drying reserve: Mr = (Mev - Mc) * 1000 = **937 g/m²/a**
Minimum requested for walls and ceilings: 100 g/m²/a

✓

Evaluation according to DIN 4108-3

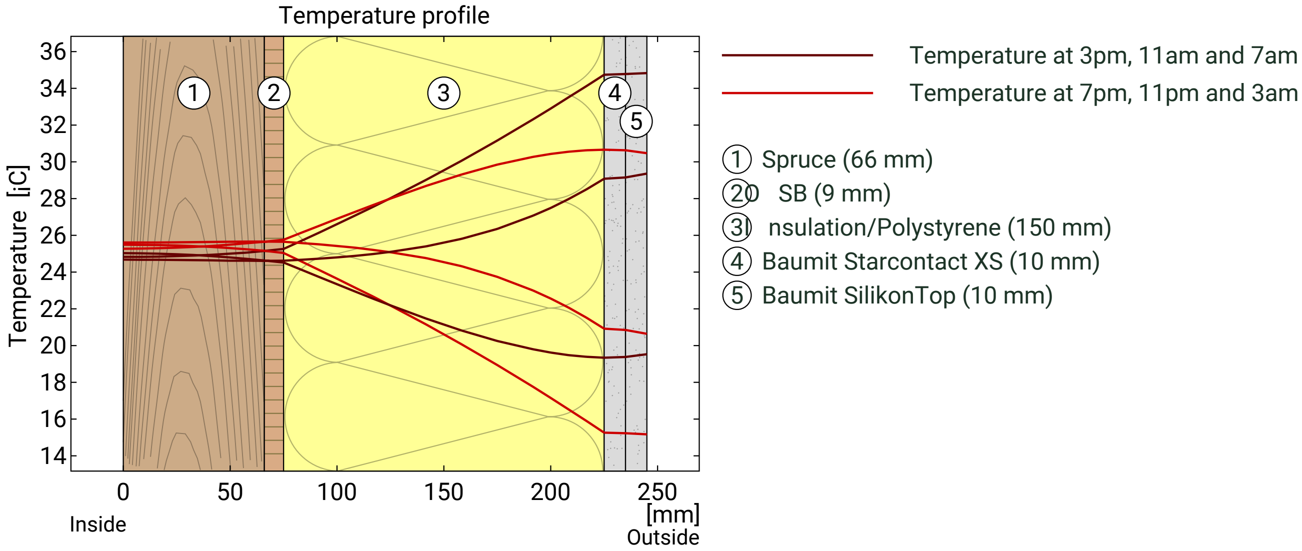
The component is permissible regarding the moisture protection.

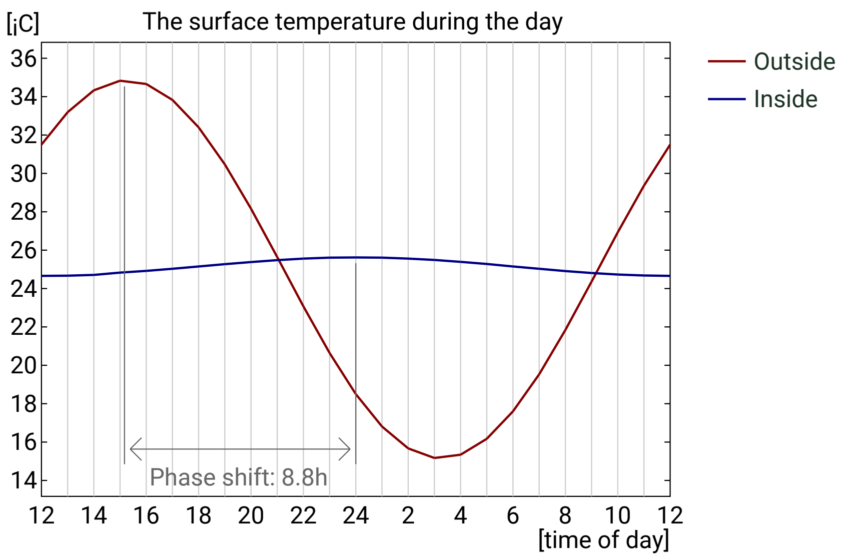
Hints

DIN 4108-3 describes in Section 5.3 components for which no moisture proofing is required as there is no risk of condensation water or the method is not suitable for the assessment. It is not possible to assess whether the component under test is underneath.

Heat protection

The following results are properties of the tested component alone and do not make any statement about the heat protection of the entire room:





Top: Temperature profile within the component at different times. From top to bottom, brown lines: at 3 pm, 11 am and 7 am and red lines at 7 pm , 11 pm and 3 am.
Bottom: Temperature on the outer (red) and inner (blue) surface in the course of a day. The arrows indicate the location of the temperature maximum values . The maximum of the inner surface temperature should preferably occur during the second half of the night.

Phase shift*	8,8 h	Heat storage capacity (whole component):	92 kJ/m²K
Amplitude attenuation **	20,3	Thermal capacity of inner layers:	55 kJ/m²K
TAV ***	0,049		

* The phase shift is the time in hours after which the temperature peak of the afternoon reaches the component interior.
** The amplitude attenuation describes the attenuation of the temperature wave when passing through the component. A value of 10 means that the temperature on the outside varies 10x stronger than on the inside, e.g. outside 15-35 ¡C, inside 24-26 ¡C.
*** The temperature amplitude ratio TAV is the reciprocal of the attenuation: TAV = 1 / amplitude attenuation

Note: The heat protection of a room is influenced by several factors, but essentially by the direct solar radiation through windows and the total amount of heat storage capacity (including floor, interior walls and furniture). A single component usually has only a very small influence on the heat protection of the room.

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