

# STANDARD\_ U=0.186 - 195mm rockwool

## 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 65% Humidity; outside: -20°C und 80% Humidity (Climate according to user input).

This component is free of condensate under the given climate conditions.

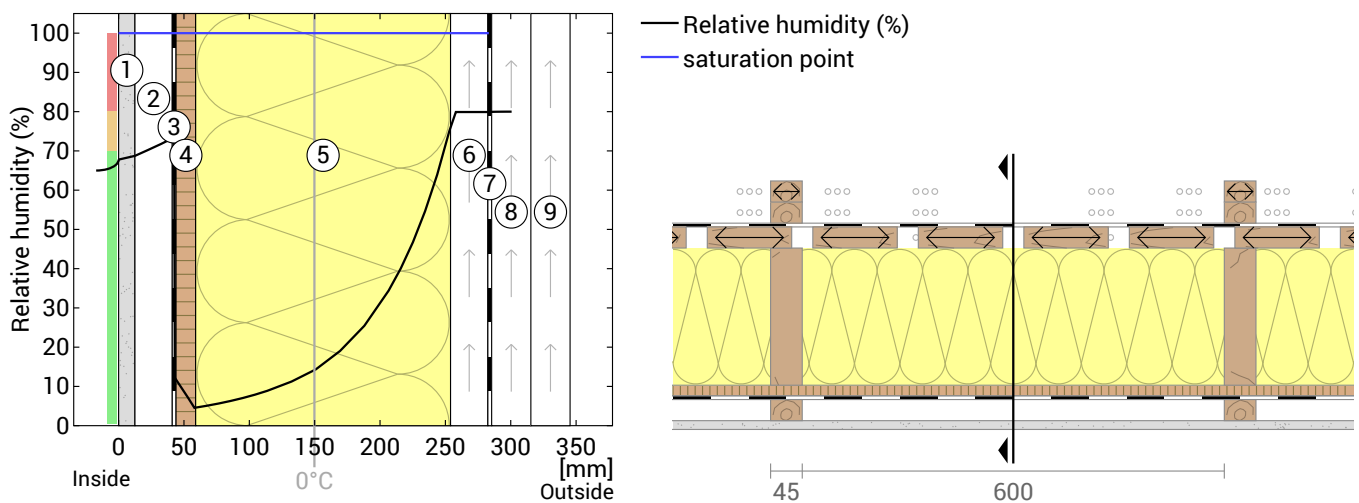
Drying reserve according to Ubakus 2D-FE method: 299 g/(m<sup>2</sup>a)  
 At least required by DIN 68800-2: 250 g/(m<sup>2</sup>a)

#	Material	sd-value [m]	Condensate [kg/m <sup>2</sup> ] [Gew.-%]	Weight [kg/m <sup>2</sup> ]
1	1,25 cm Gypsum Fibreboard	0,05	-	14,4
2	3 cm Installation level	0,01	-	0,0
	3 cm Spruce (7,0%)	0,60	-	0,9
3	0,05 cm Vapor barrier sd=100m	35,00	-	0,1
4	1,5 cm OSB/3	4,50	-	9,3
5	19,5 cm mineral wool 035	0,20	-	3,6
	19,5 cm Spruce (7,0%)	9,75	-	6,1
6	3 cm Outside air	-	-	-
	3 cm Spruce (80%)	-	-	10,4
7	0,05 cm Breather membrane sd=0,05m	0,10	-	0,4
	34,35 cm Whole component	40,11	-	47,1

## Humidity

The temperature of the inside surface is 19,0 °C leading to a relative humidity on the surface of 69%. Mould formation is not expected under these conditions.

The following figure shows the relative humidity inside the component.



- |                               |                             |                                 |
|-------------------------------|-----------------------------|---------------------------------|
| ① Gypsum Fibreboard (12,5 mm) | ④ OSB/3 (15 mm)             | ⑦ Breather membrane sd=0,05m    |
| ② Installation level (30 mm)  | ⑤ mineral wool 035 (195 mm) | ⑧ Rear ventilated level (30 mm) |
| ③ Vapor barrier sd=100m       | ⑥ Outside air (30 mm)       | ⑨ Rear ventilated level (30 mm) |

Layers marked with <-> run parallel to the illustrated cutting plane and were not taken into account in the moisture protection calculation.

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.