

SINTEF Building and Infrastructure confirms that

RBI Bathroom panel

has been found to be fit for use in Norway and to meet the provisions regarding product documentation given in the regulation relating to the marketing of products for construction works (DOK) and regulations on technical requirements for building works (TEK), with the properties, fields of application and conditions for use as stated in this document

1. Holder of the approval

RBI Interiør Norge
 Skjelfossvæien 30, Fingvoll
 NO-1822 Hobøl
 Norway
www.rbi.no

2. Product description

RBI Bathroom panel is a watertight lining system based on MDF panels at the core. The front of the panel is coated with 0,7 mm high-pressure laminate. The back of the panel is covered with transverse laminate.

Standard dimensions are 2390 mm x 620 mm. The panel thickness is 10,7 mm. The density is 780 – 820 kg/m³. Tolerances are shown in table 1.

The long sides of the panels have a self-locking profile as shown in fig. 1. Short ends are inclined. All joints shall be sealed using Bostik Silmax or CT1.

Extruded aluminium profiles are integrated components to the bathroom panel system.

Table 1

Tolerances for the production of RBI Bathroom panel

Property	Requirement	Test method
Length	± 1,0 mm	NS-EN 324-1
Width	± 0,5 mm	
Thickness	± 0,4 mm	
Squareness	≤ 1,0 mm	Diagonal deviation
Edge straightness	Max. 0,8 mm	NS-EN 324-2
Lipping tongue/groove	≤ 0,15 mm	-

3. Fields of application

RBI Bathroom panel can be used as a waterproof lining on walls in sanitary rooms. The panels can also be used in cloakrooms, washrooms, laundries, purification facilities, laboratories etc. The panels can be fixed directly to wall frames or battens, constructional boards and concrete, brick or wooden walls, included walls below ground level.

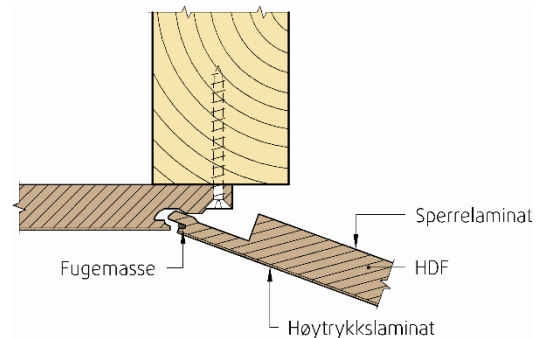


Fig. 1

RBI Bathroom panel is designed with self-locking joint profiles. A sealing compound is applied in wet areas joints during fitting.

4. Properties

RBI Bathroom panels are tested according to ETAG 022: "Guideline for European Technical Approval of watertight covering kits for wet room floors and walls Part3: Inherently watertight board". Tested properties are listed in Table 2.

The MDF core is class MDF.H according to NS-EN 622-5 and fit for general use in humid conditions.

Safety in case of fire

The panels reaction to fire is not determined, i.e. class F according to NS-EN 13501-1.

5. Environmental aspects

Substances hazardous to health and environment

The product contains no hazardous substances with priority or other relevant substances in quantities that pose any increased risk for human health or the environment. Substances with priority include CMR, PBT and vPvB substances.

Effect on indoor environment

The product is not regarded to emit any particles, gases or radiation that have either a perceptible impact on indoor climate or significant impact on health.

Table 2

Product characteristics for RBI Bathroom panels verified by type testing

Property	Result	Test method
Water vapour transmission, front, high-pressure laminate, S_d – value ¹⁾	4,1 m	NS-EN 12572
Water tightness at 1,5 bar water pressure for 7 days	Passed	NS-EN 14891 Annex A.7
Water tightness at penetrations in the wall ²⁾	Passed	ETAG 022 Annex E
Bridge building capacity - tensile strength - shear strength	2 mm – passed 2 mm – passed	ETAG 022 Annex B
Dimensional changes in the panel plane associated with changes in relative humidity - Width, 30 – 85 % RF - Length, 30 – 85 % RF - Width, 85 – 30 % RF - Length, 85 – 30 % RF	2,2 mm/m 2,3 mm/m -2,2 mm/m -2,2 mm/m	NS-EN 318
Swelling of thickness after 24 hours immersion in water	2,4 %	NS-EN 317
Tensile strength perpendicular to the plane of the board	1,6 N/mm ²	NS-EN 319
Resistance to axial withdrawal of screws	1543 N	NS-EN 320
Modulus of elasticity in bending: - longitudinal direction - cross direction	921 Nmm/mm 974 Nmm/mm	NS-EN 310
Bending strength, EI: - longitudinal direction - cross direction	520 kNmm ² /mm 520 kNmm ² /mm	NS-EN 310
Resistance to scratches	Passed	ETAG 022 Annex C
Cleaning ability	Complies with Grayscale Grade 7	SS 92 36 14
Formaldehyde release	Class E1	NS-EN 120

¹⁾ Test conditions: 93 % RH / 50 % RF ved 23 °C

²⁾ Penetrations: copper pipes Ø 15 mm and wall boxes Ø 46 mm

Waste treatment/recycling

RBI Bathroom panel shall be classified as residual waste at the building/demolition site. The product shall be delivered at an authorized waste treatment plant for energy recovery.

Environmental declaration

There is no environmental declaration according to ISO 21930 for RBI Bathroom panels.

6. Special conditions for use and installation

Storage and conditioning

RBI Bathroom panels shall be stored in dry conditions on a levelled base and décor side (front) to décor side (front) for surface protection. The panels shall be stored with unopened packaging at room temperature for 3 days prior to installation.

Underlying base

The underlying base for installation of RBI Bathroom panels shall comply with the requirements for directional and surface tolerances given in NS-EN 3420-1, tolerance class PB.

Installation on timber framework

The stud spacing shall be max. c/c 600 mm. Horizontal battens shall have a spacing of max. 800 mm. Extra studding has to be used if heavy objects will be installed, e.g. washstands.

The panels shall be fixed to the stud/battens by zinc coated ring shanked special nails or by screws as shown in fig. 1. The spacing between fixings shall be max. 200 mm. Nails or screws shall not be closer than 35 mm to the top or bottom of the panel.

Power tools must be used with caution not to damage the panels.

Installation on concrete or brick walls

When installed on concrete or brick walls, the panels shall be fixed to vertical battens with a minimum dimension of 23 mm x 48 mm. the battens shall be installed c/c 600 mm with the wide side flat. Horizontal battens shall have a spacing of max. 800 mm. A capillary obstructing layer, for instance strips of tarpaper, has to be installed between the concrete/brick wall and the battens.

Wet areas

For wet areas, all vertical joints and joints between panel and profiles or plinths have to be sealed using the wet area sealant Bostik Silmax or CT1. Sealing the vertical joints is illustrated in fig. 1. The sealant shall seep into the whole joint when the panels are pressed together. Wipe away excess sealant.

Sealing plinths and inner and outer corners is shown in fig. 2-4.

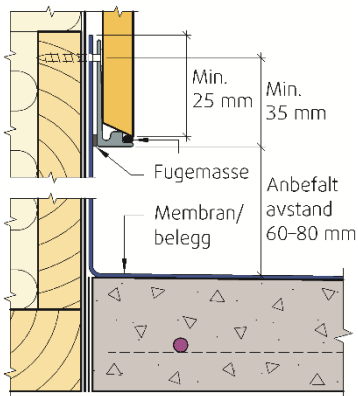


Fig. 2
Sealing panel/plinths

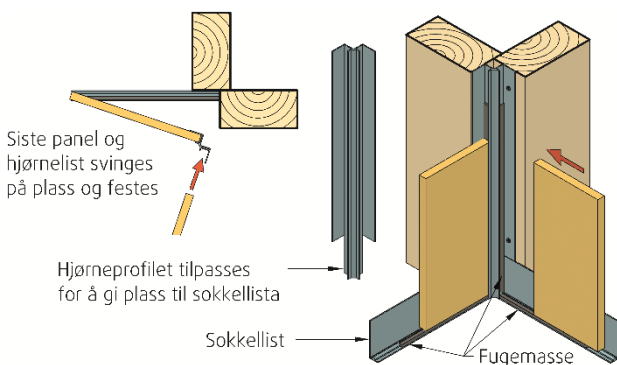


Fig. 3
Sealing corner profile inner corner

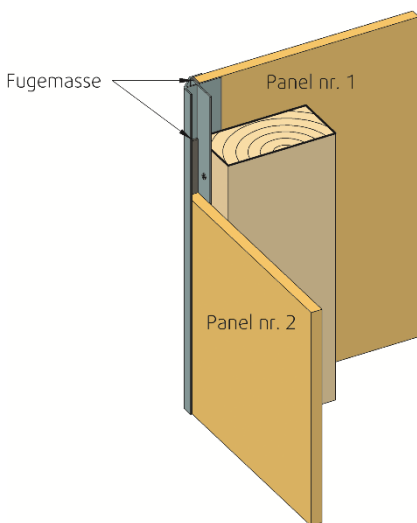


Fig. 4
Sealing corner profile outer corner

Sealing around wall boxes belonging to pipe-in-pipe system or other penetrations shall be performed with one of the following methods:

- Sleeves delivered with the wall boxes shall be attached to the bathroom panel using Bostik Silmax or CT1 sealant, shown in fig. 5.
- The tightening ring and gasket delivered with the wall boxes is to be installed as shown in fig. 6.
- For sealing pipe penetrations, Bostik Silmax or CT1 sealant shall be used.

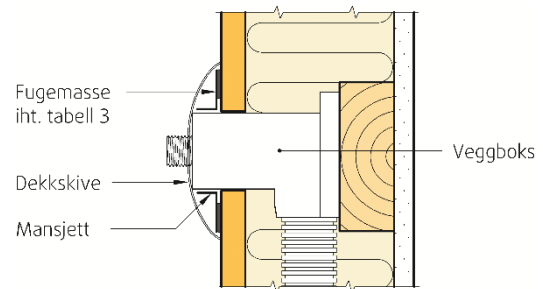


Fig. 5
Installation of a wall box with sleeve

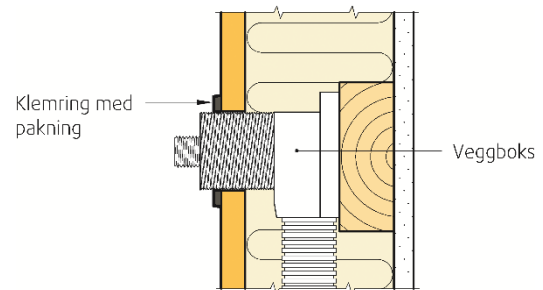


Fig. 6
Installation of a wall box with tightening ring and gasket

Vapour barrier

External walls and walls facing rooms with no or limited heating, have to have a vapour barrier on the inside, placed between the thermal insulation and RBI Bathroom panel.

Maintenance/cleaning

RBI Bathroom panels are to be cleaned with a mild detergent that does not contain abrasive material.

7. Factory production control

The product is produced by PHUW Marek Ozimkiewicz, PL-66-350 Bledzew, Poland.

The holder of the approval is responsible for the factory production control in order to ensure that the product is produced in accordance with the preconditions applying to this approval.

The manufacturing of the product is subject to continuous surveillance of the factory production control in accordance with the contract regarding SINTEF Technical Approval.

8. Basis for the approval

The approval is based on the properties documented in the following reports:

- SINTEF Byggforsk. RBI baderomspanel. Prøving iht. ETAG 022, Part 3. Rapport nr. 3B0537 av 20.03.2012.
- SINTEF Byggforsk. Prøving av vanddampmotstand for sperrelaminat. Rapport nr. 3D820605/548 av 06.05.2011.
- SP Sveriges Tekniska Forskningsinstitut. Bedømming av rengjørbarhet. Rapport nr. KMpFX206282 av 19.03.2012.

9. Marking

The product shall be labelled with the manufacturer's name, the name of the product and the date of production. The labelling may be fixed directly on the panels or on the packaging.

The approval mark for SINTEF Technical Approval No. 20200 may also be used.



Approval mark

10. Liability

The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402

for SINTEF Building and Infrastructure

A handwritten signature in blue ink that reads 'Marius Kvalvik'.

Marius Kvalvik
Approval Manager