

SINTEF Technical Approval

TG 20663

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 Provided listed on
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SINTEF confirms that

Wedi Vapor SD85 N steam resistant Building Board

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

Wedi GmbH
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 D-48282 Emsdetten,
 Germany
www.wedi.de

2. Product description

Wedi Vapor SD85 N steam resistant Building Board is a vapour-tight wet room board consisting of wedi Subliner Dry (foil membrane) applied to wedi Building Board (TG 2441). The board consists of a core of extruded polystyrene, XPS. The board has a polymer modified cement surface with a glass fibre reinforcement on both sides of the board and a foil membrane applied to one side of the board, see figure 1.

Table 1 shows the products that are covered by the approval for Wedi Vapor SD85 N steam resistant Building Board and are part of the wedi membrane board system. The dimension of the board is shown in Table 2.

Wedi Vapor SD85 N steam resistant Building Board has the following tolerance limit:

- Thickness ± 3 mm
- Length + 10 mm
- Width + 3 mm

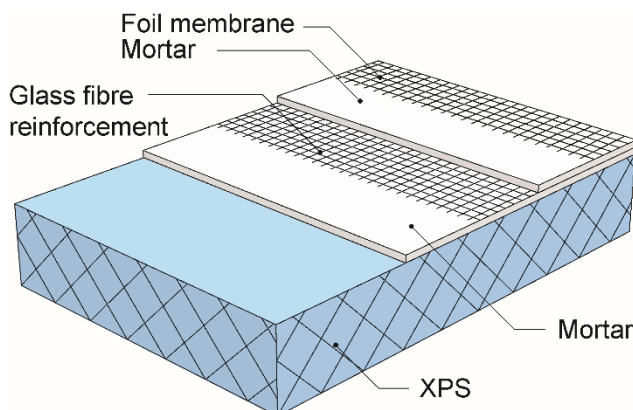


Fig. 1.
 The structure of wedi wet room board. The boards have reinforced mortar on both sides and a foil membrane on one of the sides.

Table 1

Products included in the wet room system

Product	Description
wedi Tools rørmansjett, 9 – 16 mm ¹⁾	Pipe collar for pipes 9-16 mm
wedi Tools rørmansjett, 32 - 55 mm ¹⁾	Pipe collar for pipes 32-55 mm
wedi Tools rørmansjett, 75 - 110 mm ¹⁾	Pipe collar for pipes 75-110 mm
wedi Tools tettestrekk ¹⁾	Sealing band, 25 m x 125 mm
Ardex SRM rørmansjett 12-22 mm ²⁾³⁾	Pipe collar for pipes 12-22 mm
Ardex SRM rørmansjett 40-60 mm ²⁾³⁾	Pipe collar for pipes 40-60 mm
Ardex SRM rørmansjett 80-110 mm ²⁾³⁾	Pipe collar for pipes 80-110 mm
Ardex SK 12 ²⁾³⁾	Sealing band for board joints and transitions
Weber.tec fuktsperre ⁴⁾	Primer
Webertec PC 10-28 mm ⁴⁾	Pipe cuff
Webertec PC 32-55 mm ⁴⁾	Pipe cuff
Webertec PC 110-140 mm ⁴⁾	Pipe cuff
Webertec fibermesh ⁴⁾	Sealing band fiber felt
Schönox ST ⁵⁾	Sealing band
Schönox CM 10-32, 33-60 og 70-112 mm ⁵⁾	Pipe cuff

¹⁾ In combination with Wedi Vapor SD85 N steam resistant Building Board and wedi 620

²⁾ In combination with Wedi Vapor SD85 N steam resistant Building Board og Ardex 7+8

³⁾ In combination with Wedi Vapor SD85 N steam resistant Building Board and Ardex SK105 MS

⁴⁾ In combination with Wedi Vapor 85 N and Weber tec Superflex D2

⁵⁾ In combination with wedi Vapor 85 N and Schönox IFix

SINTEF is the Norwegian member of European Organisation for Technical Assessment, EOTA, and European Union of Agrément, UEAtc

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Table 2
Dimensions of Wedi Vapor SD85 N steam resistant Building Board

Thickness mm	Standard dimension mm x mm
12,5	2500 x 600
20	2500 x 600
50	2500 x 600
80	2500 x 600
12,5	2500 x 900
20	2500 x 900
50	2500 x 900
80	2500 x 900
12,5	2500 x 1200
20	2500 x 1200
50	2500 x 1200
80	2500 x 1200

3. Fields of application

Wedi Vapor SD85 N steam resistant Building Board can be used on walls in bathroom and washrooms in houses, hotels, or rooms with equivalent conditions. The boards can be used as a waterproof layer on walls when reinforcements strips and a wet room membrane is used over joints, fasteners, and connections. Other conditions for usage are given in point 6.

4. Properties

Material Properties

Wedi Vapor SD85 N steam resistant Building Board is type tested according to ETAG 022 "Guideline for European Technical Approval of Watertight Covering

Kits for Wet Room Floors and or Walls. Part 3. Kits based on inherently watertight boards". Table 3 shows material characteristics for Wedi Vapor SD85 N steam resistant Building Board determined by type testing.

Table 3
Product characteristics determined by type testing

Property	Value	Test method
Water vapour resistance of a 30 mm thick board, s_d	$s_d = 92,4$ m	EN ISO 12572
Water tightness at 1,5 bar	Passed	EN 14891 Annex A.7
Water tightness around penetrations in walls	Passed	ETAG 022 Annex E and F
Bond Strength ¹⁾	0,27 MPa Category 1	EN 14891, A6.2.
Resistance to temperature 28 days at 60°C	Passed	ETAG 022, Part 3, 2.4.6.2
Resistance to water ¹⁾	0,34 MPa Category 2	EN 14891, punkt A6.4
Resistance to alkalinity ¹⁾	Passed Category 1	ETAG 022, part 2.4.6.4
Soft body impact resistance	20 mm board: c/c 600 mm studs 12 mm board: c/c 300 mm studs	ETAG 003

¹⁾ Tile adhesive: Wedi 320 tile adhesive, PCI Nanolight og PCI FT Extra

5. Environmental aspects

Substances hazardous to health and environment

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

Effect on indoor environment

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

Waste treatment/recycling

The product shall be sorted as residual waste. The product shall be delivered to an authorized waste treatment plant for energy recycling.

Non dry/hardened liquid applied membranes are defined as hazardous waste (according to the Norwegian Waste Regulation (Avfallsforskriften)). The product must be sorted as hazardous waste on the building site and be delivered to an authorized treatment plant for hazardous waste. The dried product is not hazardous waste.

Environmental declaration

No environmental declaration (EPD) has been worked out for the product.

6. Special conditions for use and installation

Water vapor control layer

Walls and floor separators facing the outdoor climate or rooms that have no or limited heating must have a water vapor resistance inside of the bathroom or washroom of $s_d \geq 10$ m. Wedi Vapor SD85 N steam resistant Building Board meets the required water vapour resistance, see table 3. Only sealing over joints, screw fixings and penetrations are necessary. Any plastic foil in external walls shall be removed before the membrane boards are installed.

Safety in case of fire

Wedi Vapor SD85 N steam resistant Building Board (with thickness up to 50 mm) can be used in ≤ 25 m² wet rooms. The fire safety must be documented with an analytical fire safety design for larger wet rooms, thicker boards or for other usages than mentioned in point 3

The wet room board shall always be covered with ceramic tiles or at least 8 mm of reinforced fiber plaster, also on the wall above the lined ceiling.

The wet room boards cannot be used on fire resistant building elements with penetrations, drains, pipes, or cables unless it can be demonstrated by fire technical analysis that the boards do not contribute to increased fire risk or spread of fire.

See Byggforskserien 520.339 *Bruk av brennbar isolasjon i bygninger.*

Substrate

The substrate for installation of Wedi Vapor SD85 N steam resistant Building Board shall fulfil the requirements for directional and surface deviation for tolerance class B (2) given in NS 3420-N4.

Installation on framework

Wedi Vapor SD85 N steam resistant Building Board thickness of 20, and 50 mm can be installed on a framework with stud distance of c/c 0,6 m with at least 50 mm thick mineral wool between the studs. For wet room board with 12 mm thickness or smaller the framework must have a stud distance of c/c 0,3 m.

Wedi Vapor SD85 N steam resistant Building Board thickness 12, 20, 50 mm can also be installed directly on building boards that is at least classified K₂10 A2-s1,d0 according to EN 13501-2.

Wedi Vapor SD85 N steam resistant Building Board with thickness 12 and 20 mm can be installed on a tree-based board with fire resistance K₂10. The boards must have a thickness of 12-18 mm and a density of 400-650 kg/m³, i.e., OSB-boards, plywood boards or 15-18 mm rough panel. A minimum of 50 mm thick mineral wool must be used between the studs.

Extra horizontal noggins or extra board layers, with a minimum thickness of 15-18 mm must be added to be able to install heavy objects such as wash basin, cabinet, support handle at closet etc.

Installation on masonry or concrete

When installing directly on masonry or concrete, the boards must be fixed with a cement-based tile adhesive with a minimum of 6 mm notch, depending on the substrate. All loose wallpaper, plaster, paint, and dust must be removed before attaching the boards, and the absorbency of the substrate must be controlled.

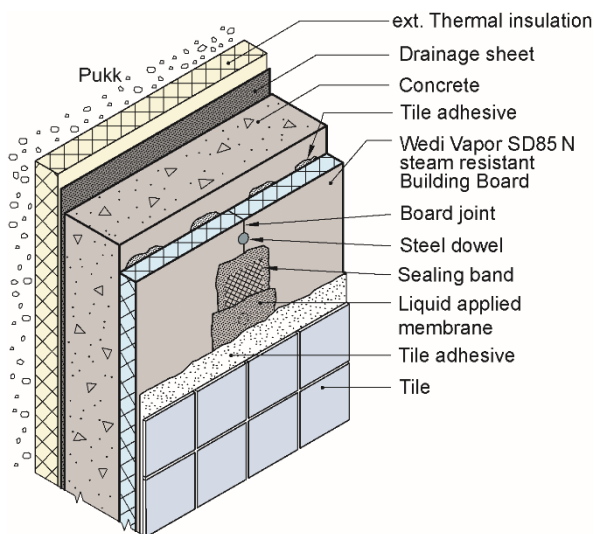


Fig. 2 Example of wedi wet room board used on a wall below ground level

Liquid applied membranes and sealants

The sealants in table 4 and the liquid applied membranes in table 5 must be used as a watertight layer over board joints, and pipe penetrations. The sealants and membranes have all been tested with Wedi Vapor SD85 N steam resistant Building Board according to ETAG 022.

Table 4 Overview of the different liquid applied membranes that have documented compatibility with wedi wet room board

Sealant
Wedi 620
Ardex SK105 MS
Weber tec Superflex D2
Schönox IFix

Table 5 Overview of the different liquid applied membranes that have documented compatibility with wedi wet room board

Membransystem
Ardex 8+9, 7+8, og 8+9 LW (TG 2101) ¹⁾

¹⁾The membrane has SINTEF Technical Approval

Sealing of pipe penetrations, joints and transitions

In the wet zones, all board joints, transitions between floor and wall, corners, penetrations and screw fasteners must be sealed with a liquid applied membrane or sealant with associated sealing details such as reinforcement tape and collars, see table 2.

Surface treatment

Wedi Vapor SD85 N steam resistant Building Board should always be covered with tiles. The water absorption of the tiles must not be more than 20%.

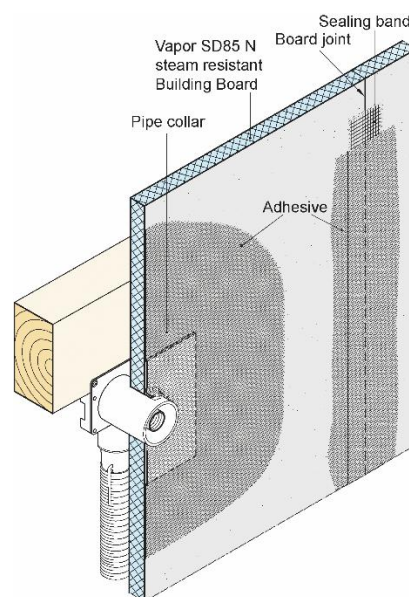


Fig. 3 Principle for waterproofing around pipe penetrations and over joints

7. Factory production control

Wedi Vapor SD85 N steam resistant Building Board is produced in Germany by wedi GmbH.

Wedi sealing details are produced in Germany.

The holder of the approval is responsible for the factory production control to ensure that wedi wet room board is produced in accordance with the preconditions applying to this approval.

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

The producers have a quality system that is certified according to EN ISO 9001.

8. Basis for the approval

The evaluation of Wedi Vapor SD85 N steam resistant Building Board is based on reports owned by the holder of the approval.

9. Marking

The boards must be marked with the manufacturer and product name as well as the time of production. The marking is placed either directly on the boards or on the packaging. It can also be marked with the approval mark for Technical Approval; TG 20663.

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



Hans Boye Skogstad
Approval Manager