



AquaSlab® 1212

Watertight HDPE membrane with the unique technology to permanently join fresh concrete mix for underground structures in difficult water-soil conditions

- insulation fully consolidated with the structural layer
- adhesive layer is activated in contact with poured out concrete
- no water migration between the membrane and the structural layer
- cold laying
- simple and quick installation
- can be laid at temperature below 0°C , at different weather conditions
- crack bridging ability up to 3 mm

Product description

AquaSlab 1212 is the waterproof and watertight membrane of thickness 1,2 mm, laid under slabs and on foundation walls. It also protects against chemicals and contaminants that can be found in soil and underground water (exposure class XA3). It is a barrier for vapor and radon.

It consists of HDPE foil of high mechanical and chemical resistance, covered with adhesive layer to join poured out concrete structure, and a protective film.

The membrane bands have adhesive strap of 8 cm to lap the vicinal sheets. As a standard, it is laid at atmospheric temperature between -10 °C and +30 °C.

AquaSlab 1212 provides maximum protection against water. Unique technology to join concrete structure on the whole surface using the adhesive guarantees tight joint that prevents water migration. Concrete mix sedimentation, ground settlement and structure deformation have no effect on isolating layer watertightness as the membrane "undergoes" the concrete structure. Eventual damages during laying and after concrete is poured out, can be easily discovered and repaired. The membrane is smooth, so contaminations can be removed easily.

System complementing

The membrane is complemented by:

- double-sided tape **AquaSlab BITAPE**
- tape with a layer bonding to concrete **AquaSlab COVER TAPE**
- an agent increasing the adhesion of tapes **AquaSlab Activator**
- liquid polymer-bitumen membrane **Sealutex PLUS**
- bitumen trowelling compound **AquaThene MASTIC**

Intended use

AquaSlab 1212, as a watertight insulation of heavy type, is designed for waterproof protection of foundation slabs and walls in single-sided and double-sided timbering systems. It can be laid on foundations of low strength parameters such as: lean concrete or ground.

Requirements

The product meets requirements of the standard: PN EN 13967 for products of T type

Preparation of the substrate

The substrate should be non-deformable, compact, smooth and free of unevenness, cracks or sharp projections; it should be cleaned from loose aggregate and contaminations. The substrate surface needn't be dry but no water should stay on it; the excessive water shall be drained.

The horizontal substrate should be a layer of concrete or other concentrated structure, eg. ground stabilized with sand with cement or dimpled film. The insulation shall not be laid on non-thickened substrate with loose fragments.



AquaSlab 1212



AquaSlab COVERTAPE



AquaSlab BITAPE

Application

Spread **AquaSlab 1212** sheets; the whole surface of the membrane layer must adhere to the substrate and the protective film must be on the top. The ends of the membrane should be arranged alternately. The bands shall create an 8 cm wide overlap. Before the membrane sheets are glued together, make sure that the bottom of the band to be glued is clean and dry. Then tear off the protective film from the adhesive strip and glue the membrane sheets together. Press the joint thoroughly to provide full adhesion and tight joint.

In the transverse joints of the strands, an 8 cm overlap should be made with **AquaSlab BITAPE** and/or **COVER TAPE**. Before sticking the tape, make sure that both ends of the bands are clean and dry. Remove the protective films from both sides of the tape. In the places where the tapes are glued, clean the top layer of the membrane with **AquaSlab Activator** and wipe dry with a paper towel. The longitudinal adhesive strip of the membrane does not require cleaning with an activator.

When insulation is carried out on vertical surfaces, fasten the membrane mechanically, at least 4 cm from the edge; the membrane must adhere flat to the surface. Connections places should be properly sealed with **AquaSlab COVER TAPE**.

All connections should be made so that the surface of the insulation, both horizontal and vertical, is smooth, without wrinkles and corrugations.

The edges of the **AquaSlab 1212** membrane, passages through the through-holes, pipe culverts, band-iron, and anchorages should be protected with **Sealutex PLUS** or **AquaThene MASTIC**.

Remove the protective foil from the membrane before starting the installation of the reinforcement. Concreting should be completed within 60 days after removing the foil.

Tools and auxiliary materials

- measure tape
- knife with retractable blade
- plasterers feather edge / board
- heat gun
- paper towel

Recommendations

The minimum thickness of the pressure layer of concrete is 15 cm. If a thinner layer is used, there is a risk of reducing the bond between the insulation and concrete.

If the roll consists of two membrane strips, they should be joined crosswise with **AquaSlab BITAPE** and/or **COVER TAPE**.

The use of **AquaSlab Activator** is required to obtain an optimal, permanent bond between the top layer of the membrane and the adhesive side of the **AquaSlab BITAPE / COVER TAPE** tapes.

In the recesses and places exposed to stress apply **AquaSlab BITAPE / COVER TAPE** tapes in sections no longer than 50 cm.

Do not lay insulation in rain, snow and strong winds.

The recommended application temperature and 24 hours after its completion is from -10 °C to +30 °C. For installation at other temperatures, please contact the manufacturer.

When laying below +5 °C, heat all joints with hot air and press firmly.

Before commencing concreting, check that the surface of the membrane is not damaged.

Eventual repairs should be made with **AquaSlab COVER TAPE**.

Be careful not to damage the membrane while pouring the concrete.

The formwork can be removed only when the concrete reaches the strength of min. 10 MPa. The application should be performed by teams trained by the manufacturer's representative.

Avoid open flame during and after application until the concrete layer is poured out. Ensure protection of the insulation during reinforcement cutting and welding.

Consumption

About 1,1 m² of the membrane per each m² of the insulated surface

Package

Roll of 1,2 m x 20 m., 24m²

Shelf life and storage

36 months in original package providing they are stored according to the guidelines.

Rolls of **AquaSlab 1212** shall be stored in dry and well ventilated place. Avoid direct sunlight and high temperature. Do not stack pallets.

Industrial safety

Wash your hands with warm water immediately after the work is finished.

The protective film layer is slippery. It shall be removed from the workplace immediately after arrangement.

PROPERTIES ACCORDING TO EN 13967 STANDARD	STANDARD NO.	AquaSlab 1212
watertightness at 60 kPa	EN 1928 method B	pass at 400 kPa
resistance to tearing (nail)	EN 12310-1	long ≥ 600 N, poprz ≥ 550 N
joint (connection) strength	EN 12317-2	long ≥ 750 N/50 mm trans ≥ 920 N/50 mm
resistance to impact	EN 12691 method A	≥ 400 mm
tensile properties: maximum tensile force	EN 12311-2 method A	long ≥ 780 N/50 mm, trans ≥ 790 N/50 mm
tensile properties: elongation at maximum tensile force	EN 12311-2 method A	long ≥ 1100 %, poprz ≥ 1100 %
resistance to static loading	EN 12730	≥ 20 kg
watertightness after artificial ageing at 60 kPa	EN 1296 / EN 1928	pass at 400 kPa
watertightness after exposure to chemicals at 60 kPa	EN 1847 / EN 1928	pass at 400 kPa
reaction to fire	EN 13501-1	class E
hazardous substances		none
OTHER PROPERTIES		
straightness	EN 1848-2	20 mm [± 10 mm]
length	EN 1848-2	20 m [+0,1 m]
width	EN 1848-2	1205 mm [± 5 mm]
nominal thickness	EN 1849-2	1,2 mm [± 10 %]
mass per unit area	EN 1849-2	1,2 kg/m ² [± 10 %]
compatibility with bitumen	EN 1548 / EN 1928	pass
water vapour transmission properties	EN 1931	μ = 153528,9 Sd = 202,742 m
tensile properties: elongation at break	EN 12311-2 method A	long ≥ 1200 %, trans ≥ 1200 %
joint (connection) strength	EN 12317-2	average value ≥ 835 N/50 mm
tensile properties	EN 12311-2 method B	long ≥ 17 N/mm ² , trans ≥ 16 N/mm ²
tensile properties: elongation	EN 12311-2 method B	long ≥ 820 %, trans ≥ 820 %
peel resistance	EN ISO 22631 (post. EN 1372)	≥ 2,83 N/mm (after 28 days to concrete)
tensile strength	EN ISO 527-3	≥ 11 MPa
adherence to concrete (at field conditions)	EN 1542	0,3 MPa
visible defects	EN 1850-2	none
crack bridging ability	EN 14224	10000 cycles; crack up to 3,2mm
flexibility at low temperature	EN 495-5	-40 °C
resistance to aggressive environment (exposure class XA3)	EN 13529	pass
resistance to lateral water migration	ASTM D5385 mod.	7 bar
resistance to hydrostatic pressure	ASTM D5385	7 bar
puncture resistance	ASTM E154	1080 N
radon diffusion coefficient	K124/02/95 Test method	membrane (10,0±1,0) · 10 ⁻¹² m ² /s joint long (7,7±0,7) · 10 ⁻¹² m ² /s joint trans (1,3±0,1) · 10 ⁻¹² m ² /s
consumption		About 1,1 m ² of the membrane per each m ² of the insulated surface

The data contained in this technical data sheet are based on our experience and research, and constitute general information about the product and recommendations for application under standard conditions. The manufacturer guarantees the quality of the product, but has no influence on the conditions and manner of its use. In case of doubt, please contact us or make your own tests. With the appearance of this technical data sheet, the previous ones will no longer be valid.

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