GURU
waterproofingproducts®

INSTALLATION GUIDE

WATER-STOP

GENERAL INSTRUCTIONS

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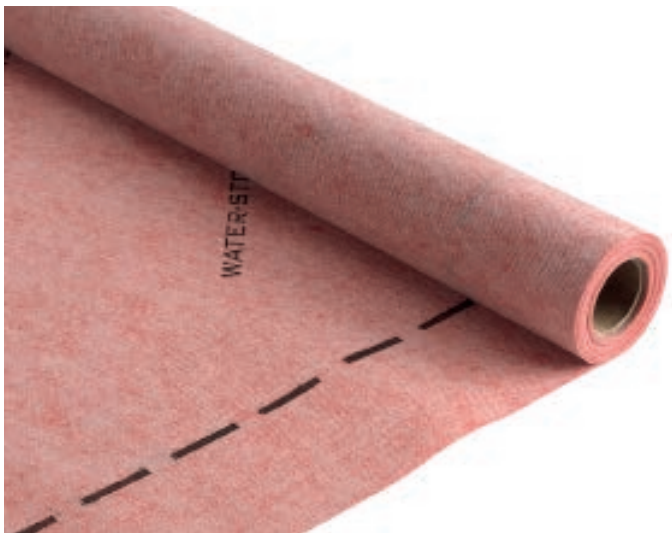
DESCRIPTION



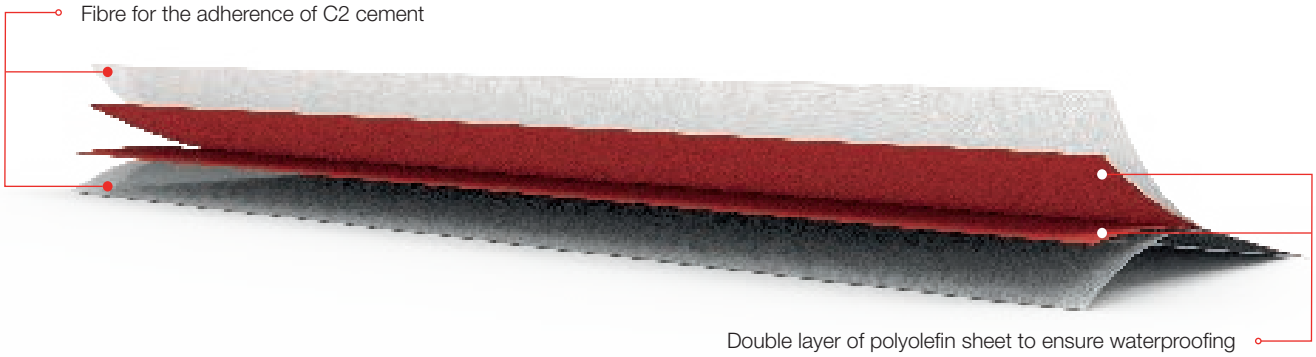
The WATER-STOP membrane and its range of accessories constitute a quick and easy system and waterproofing solution under coating in new builds or pool renovations.

The membrane is made up of a multi-layer structure that bridges small cracks, absorbs the stresses of the joint between the coating and the substrate and reduces problems such as peeling and carbonation, thus contributing to ensure the integrity of the pools. One of its main advantages over its competitors is the ease of installation (as a single person can do it). Another is the durability of the waterproofing.

• STRUCTURE

WATER-STOP is a waterproof elastic geotextile membrane with a very good grip on surfaces and with a very low thickness due to its exclusive multilayer extrusion process.

It is formed by a double sheet of thermoplastic polyolefin obtained by extrusion that provides waterproofing and is coated on both sides of non-woven synthetic fibres that provide the grip. Total thickness: 0.57 mm.



• PROPERTIES

» 100% impermeable

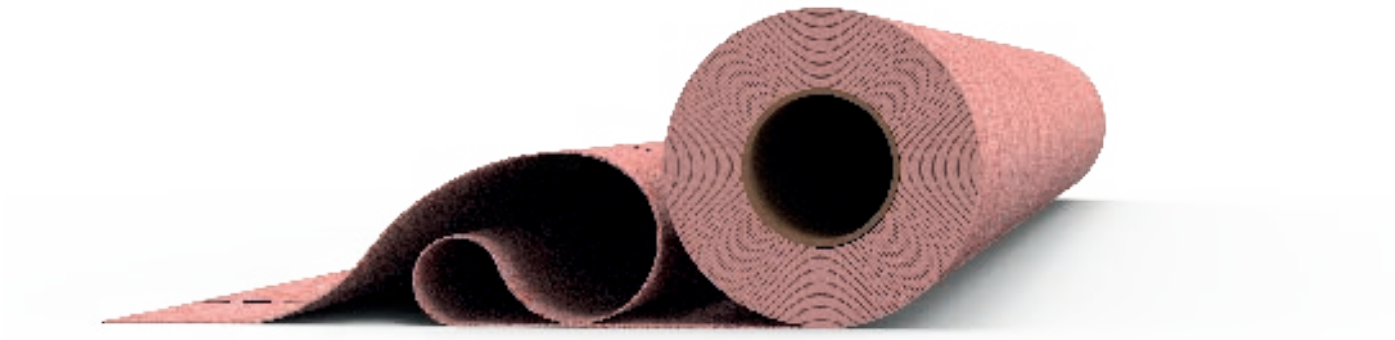
As the HDPE polyethylene sheet is completely waterproof, the joints between sheets and the outflows between the floor and the wall must be sealed.

» Minimum assured height

Up to 5 times thinner than other waterproofing membranes and up to 10 times lighter.

» Flexible and resilient

» Draining capacity to the standard EN 1253



MEASUREMENTS AND ACCESSORIES

• AVAILABLE SIZES

ROLLO 1 x 5 m
Peso: 1,6 kg - Superficie: 5 m²

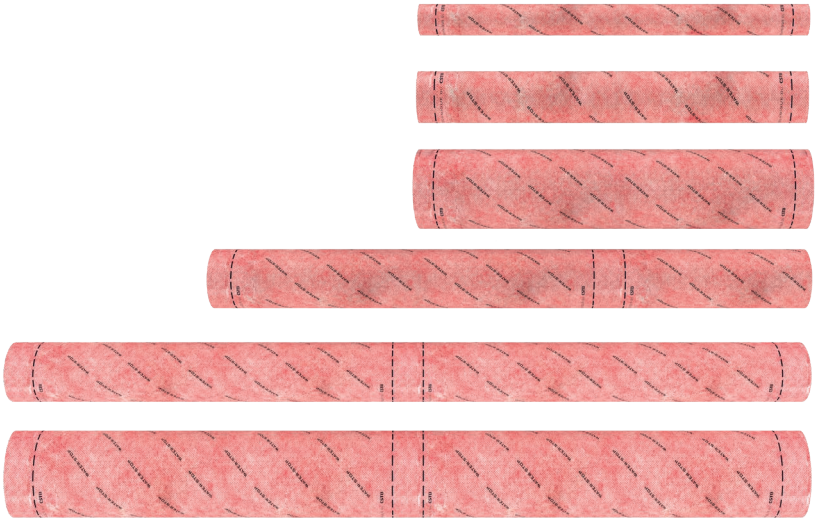
ROLLO 1 x 10 m
Peso: 3,2 kg - Superficie: 10 m²

ROLLO 1 x 30 m
Peso: 8,7 kg - Superficie: 30 m²

ROLLO 1,5 x 20 m
Peso: 8,7 kg - Superficie: 30 m²

ROLLO 2 x 20 m
Peso: 11,7 kg - Superficie: 40 m²

ROLLO 2 x 40 m
Peso: 23,4 kg - Superficie: 80 m²



• ACCESSORIES

The WATER-STOP membrane system is completed with transformations of its membrane in the form of moulded bands and pieces in addition to other functional items.

W-S DIN
Inner corner strengthener 90º.

W-S DEX
Outer corner strengthener 90º.

W-S TUB
Pipe reinforcement.

SAFETUB
Adaptable pipe reinforcement. 3 types available.

BANDA W-S 14: 14 x 20 m
BANDA W-S 34: 34 x 20 m
Reinforcement and ends at meeting points between vertical walls and joints.

W-S BUTYL
Two-sided adhesive sealing tape for joints. Measurements: 5x10 m.

MASTIC
High-module MS polymer adhesive sealer/ 290 ml can.

EASEAL
Mono-component modified polymer mortar (PCC) Elastic and flexible waterproofing material. 3 kg bucket 20 kg sack

APPLICATION

• PREPARING THE SUBSTRATE

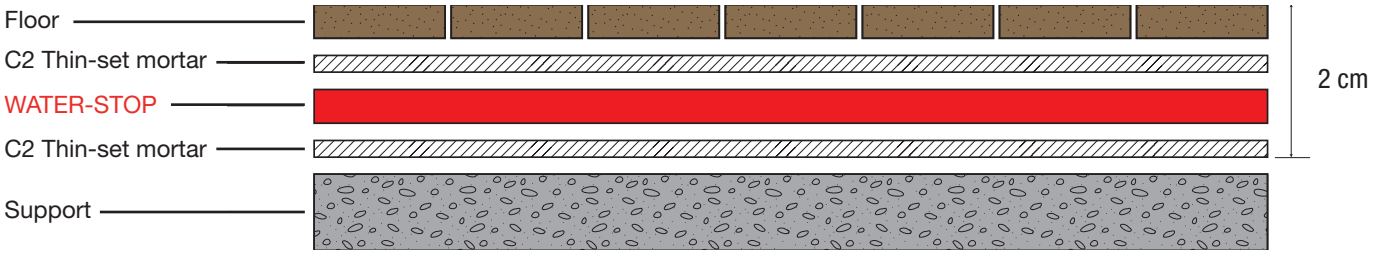
The surface of the base support must be completely smooth and uniform, be set and dry, without peaks, holes or cavities, sharp edges or bumps greater than 1 mm and lack of foreign bodies. The flatness tolerance is 5 mm with the 2 m ruler.

When the base support is made of insulating plates, these must be placed locked and without gaps between them.

Clean off any dust carefully just before the installation of WATER-STOP

» New substrate

If they are **insulating plates**, they must be fitted end-to-end and without gaps between them. If there are **inclines**, they must be not less than 1% and not more than 5% towards the water evacuation elements and have sufficient cohesion and stability under mechanical stresses. If it made of **cellular concrete** or **expanded clay** it will have to be finished with a layer of mortar between 1.5 and 2 cm thick with a dosage of at least 250 kg/m3.

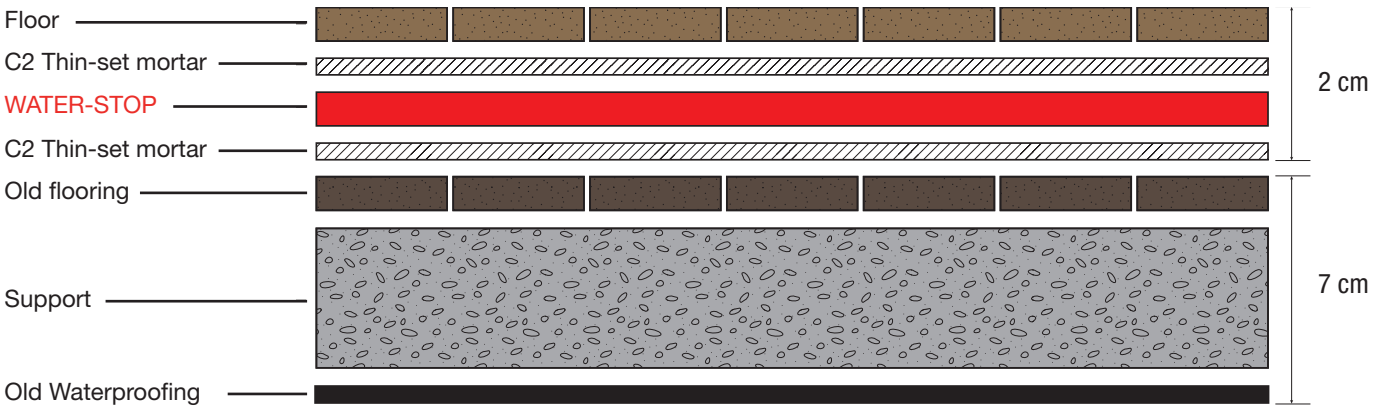


» Old substrate

Inspect the support by a visual and, if applicable, sound examination (listen for a hollow sound) to determine the areas of the old coating to be preserved, treated or eliminated. Check for subsidence or differences in level, lack of cohesion, fissures, poorly adhered or broken pieces.

Repair and remedy with appropriate structural repair mortar. If the old coating is to be preserved, prepare it by plastering, levelling and surface treatment applying primer if the type of substrate requires it.

Clean off any dust carefully just before the installation of WATER-STOP.



INSTALLATION

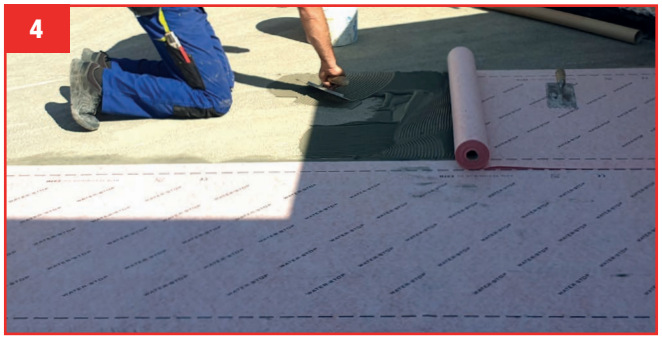
• BEFORE YOU INSTALL WATER-STOP

Take measurements, make a plan of materials and prepare the surface area: formation of slopes, installation of sinks, installation of separator layers, insulation, compression layer, prepare setback or grooves in walls for the finishing upward strip. The different parts of the construction must be carried out in accordance with the conditions required by the applicable regulations and technical standards.

1. Check that the base surface has no uneven patches or debris that could pierce the sheet.

2. Prepare and treat particular points and items that will be connected to the sheet such as feeds to drains, expansion joints, pipes etc

3. Prepare the sheets to the required measurements. Allow between 5 and 10 cm for the overlaps where sheets join and that the base sheet must rise up to 20 cm on the walls.



4. Glue the WATER-STOP sheet to the base leaving the overlaps and joints unclosed: spread the cement with the toothed trowel in parallel lines and apply the sheet on the fresh adhesive, pressing hard to achieve maximum adhesion.

5. Glue and seal the joints between sheets. To ensure the sealing of the joints you can use W-S SEALMORTAR (or similar) elastic waterproof cement, W-S MASTIC adhesive and sealing putty (or similar) or W-S BUTIL butyl sealing tape.

6. Check and ensure critical points are reinforced: corners, where the floor and walls meet, expansion joints, etc. Use WATER-STOP fittings for the reinforcement treatment of corners, joints, vertical strips and pipes and recommended sealing materials.

7. Whenever necessary, wait 8 to 24 hrs for the sealing material to cure and perform a water test to check that there are no flaws.

8. Once it has passed the water test, and any loss of watertightness has been dealt with, place the tiling or surface by gluing it directly on top of WATER-STOP.

• TO GLUE WATER-STOP TO THE BASE LAYER

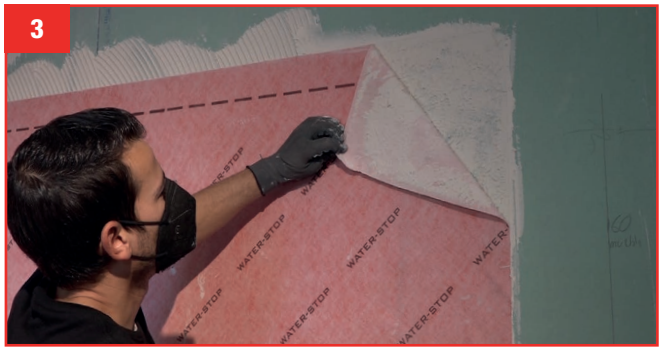
Use cement and a 3 x 3 mm or 4.5 x 4.5 mm toothed trowel.

On traditional work base layers, cement with a minimum classification of C2 to EN 12004 or ISO 13007 standards or that complies with ANSI A118.4, ANSI A118.11 or ANSI A118.15 standards must be used. For plaster, old ceramics and others, check that the chosen adhesive is suitable for the base layer. Follow the manufacturer's instructions.

In the case of some base layers (such as old ceramics) it may be necessary to use primer to improve the grip of the cement. It is important to ensure that the manufacturer indicates that the cement is suitable for the type of base layer or recommends the use of the associated primer indicated by the manufacturer.

1. Apply to the surface to be covered by pressing with the smooth, plain part of the trowel to obtain maximum adhesion to the base layer. Spread in a layer of regular thickness making passes in one direction only with the toothed part.

2. Put the WATER-STOP sheet on the fresh adhesive. Tighten, get rid of any creases or wrinkles and press hard from the centre to the edges with the smooth part of the trowel to expel air and excess material from underneath and achieve good adhesion.



3. Lift a corner to check that the veil of fibres is completely covered with adhesive. If necessary, increase the amount of adhesive or correct the pressure.

4. Fit the following strips of sheet leaving the joints unattached. The gluing and sealing of the joints will be carried out after the sheet has been placed on the entire surface.

INSTALLATION

To work more comfortably when installing 2 m wide size

Two people are required to handle the sheet. Present the piece of the WATER-STOP sheet to be placed. Aim it accurately and pull slightly to tighten and eliminate wrinkles.

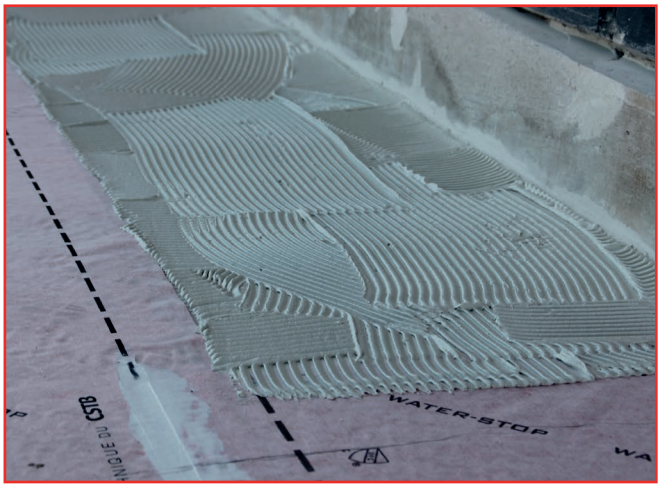
Lift a side edge and fold back to half-way of the width of the sheet on the other half to clear the base layer area where the application of the cement will begin.

Then apply the cement glue, spreading it in sections and returning the sheet to its position to glue it by pressing towards the edge with the help of the smooth face of the trowel.

Once glued along the entire length, lift and fold the other half wide and proceed likewise.

- **TO GLUE COVERINGS TO WATER-STOP**

Use a toothed trowel recommended for the size and type of tile being fitted. It needs to be of sufficient measure to achieve more than 80% of mortar contact between the tile and the sheet for indoor installations, and more than 95% for outdoor installations, commercial floors and applications in wet areas.



Use a cement suitable for the type of coating with a minimum classification of C2 according to EN 12004 or ISO 13007 or that complies with ANSI A118.4, ANSI A118.11 or ANSI A118.15 standards. Apply in accordance with the manufacturer's instructions

On small surfaces that do not require a watertightness test, the coating can be placed immediately after the installation of WATER-STOP without mandatory waiting time. In all other cases, wait for 24/48 hours.

INSTALLATION

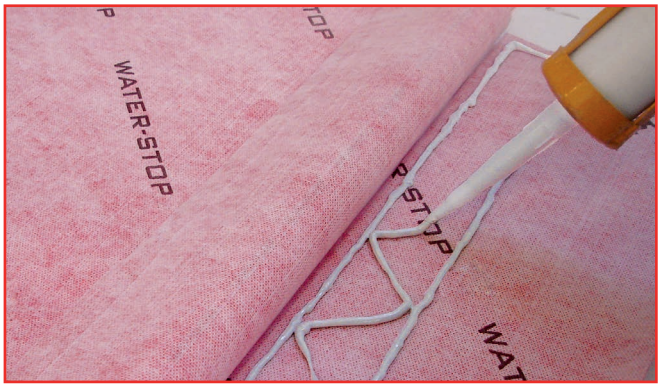
• TO GLUE JOINTS OF THE WATER-STOP MEMBRANE

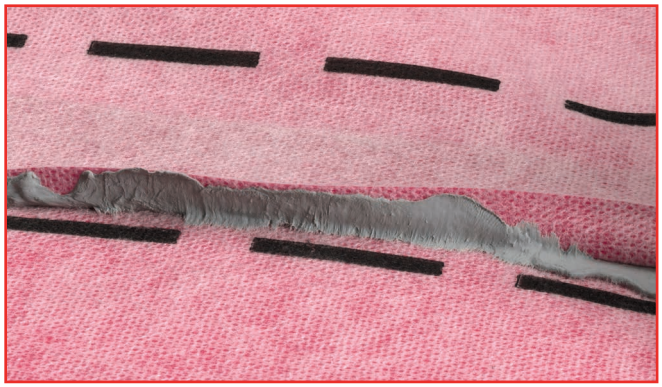
The formation with WATER-STOP of the waterproofing membrane is the most important part of the waterproofing system and special care must be taken when laying it on site.

The waterproofing membrane is formed by joining water-stop sheets together. The joint between WATER-STOP sheets shall be made by superimposing an overlap in the direction of the slope or by coupling the sheets together end to end with a joint cover.

The watertight bonding and sealing between WATER-STOP sheets can be achieved with different materials that complement the membrane's elasticity:

- EASEAL elastic waterproof cement or similarr
- W-S MASTIC adhesive putty and sealer or similar
- W-S BUTIL Butyl Adhesive Sealing Tape





In each case, it is advisable to use the one that is most appropriate to the characteristics of the installation.

In general, the same cement used when laying the membrane can be used to close the joints in the walls, in work showers and small interior surfaces not prone to flooding.

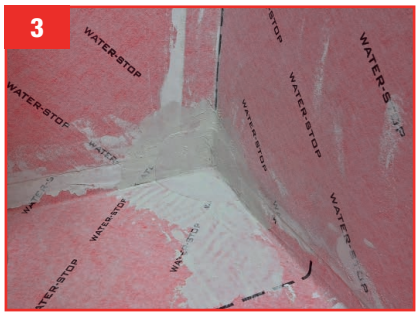
• DEALING WITH UNUSUAL ELEMENTS

Apply a waterproofing reinforcement on the elements that, due to their characteristics, require especially careful treatment. You can use special parts made in the factory tailored to the installation (ask your distributor for terms & conditions and prices) or make a reinforcement piece on site with WATER-STOP membrane following the indications:

» Inner and outer corners

In inner and outer corners a reinforcement must be applied to the waterproofing if cuts have been made to adapt the sheet to the shape of the surface.

Preformed angles W-S DIN and W-S DEX will be used as reinforcement by gluing and sealing with EASEAL polymer mortar or similar (elastic waterproof cement) or with W-S MASTIC adhesive putty and sealant.



» Points where roof surfaces meet walls

Once the laying of the sheet on the entire surface is finished, the membrane is connected to the vertical walls.

So that water from precipitations or that seeps through the vertical wall does not filter through the upper end of the waterproofing, the finishing must be made in one of the following ways:

a) by means of a setback whose depth with respect to the external surface of the vertical wall must be greater than 5 cm and whose height above the protection of the roof must be greater than 20 cm.

b) by means of a groove of at least 1 x 1 cm in which the waterproofing with mortar must be received and the wall edge must be rounded.

The waterproofing must extend along the vertical wall up to a height of at least 20 cm above the roof protection. The extension can be carried out by lifting the piece from the floor or, preferably, by means of overlapping bands on the floor.

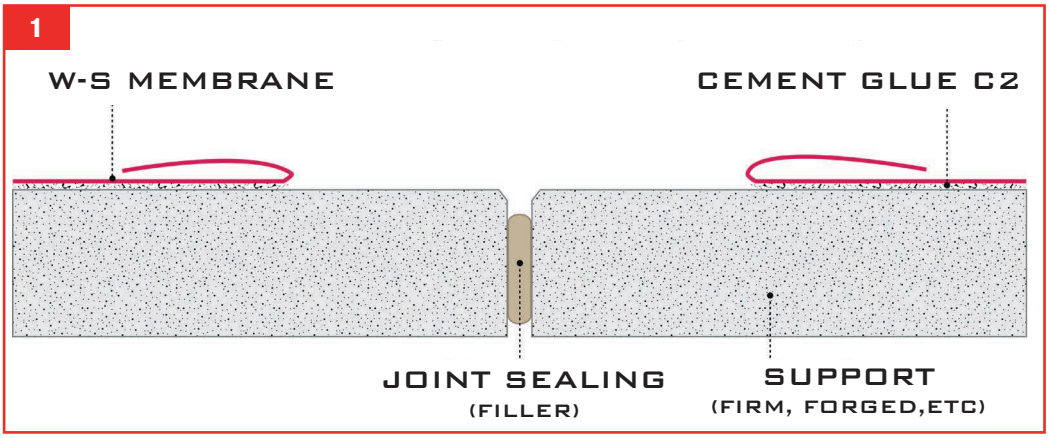
In any case, the prolongation of the waterproofing on the wall must be protected from exposure to light.

» Expansion joints

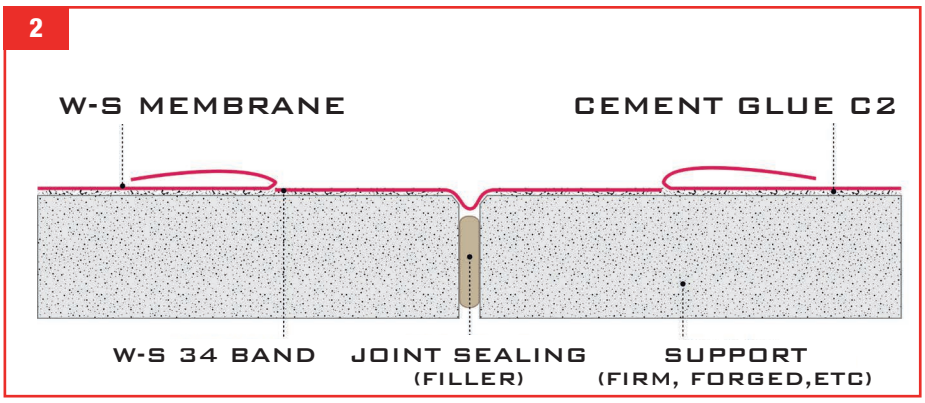
Expansion joints of resistant substrate, structural joints and roof expansion joints are to be treated during the installation of the waterproofing membrane.

The edges of the expansion joints should be blunt, with an angle of approximately 45°, and the width of the joint should be greater than 3 cm.

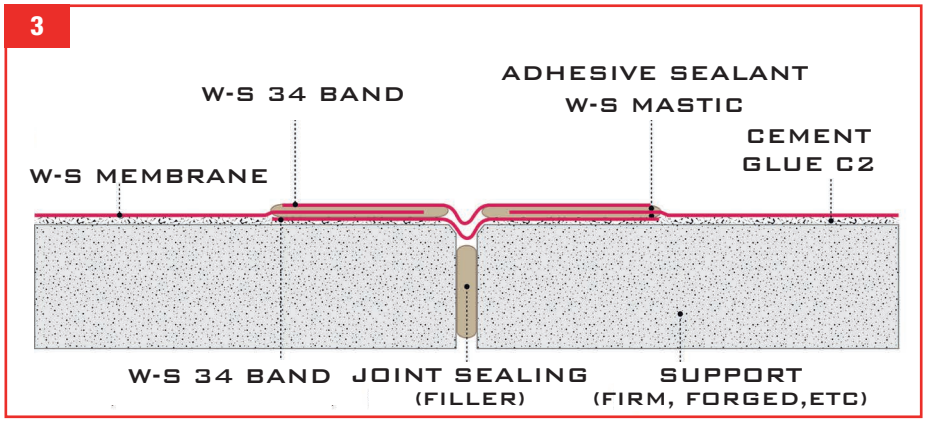
The installation of the sheet is interrupted on each side of the joint and a specific waterproofing treatment is applied on the joint that is attached to the adjacent sheets giving continuity to the formation of the waterproofing membrane as per the following procedure:



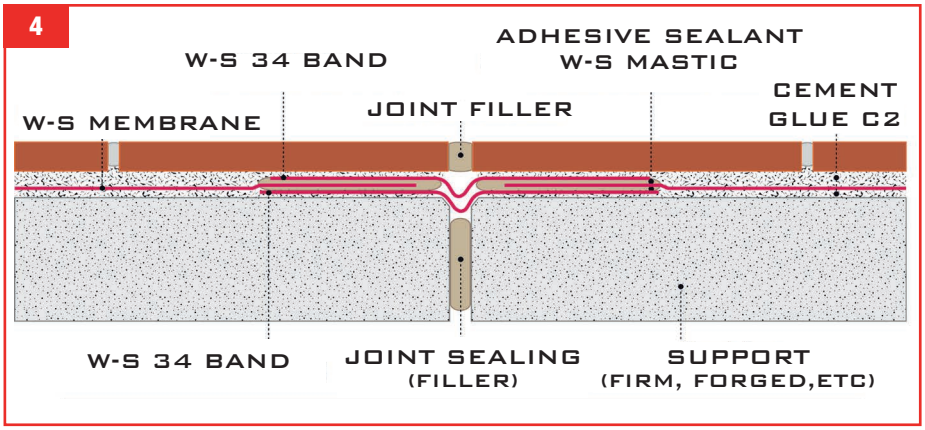
Fit the sheet to each side of the joint and leave the last 20/30 cm unglued. Place on the joint a reinforcement with 34 cm W-S BAND applying cement and gluing the band to each side leaving a gusset of about 2 cm centred on the joint. Press firmly towards the edges with the smooth face of a trowel in order to eliminate any air that could be trapped underneath and achieve maximum adhesion.



Glue the sheets of the skirts adjacent to the support following the described procedure and leave the overlaps on the reinforcement band to be dealt with later.



Once the installation of the waterproofing membrane is finished, when the gluing and sealing of the overlaps is carried out, another 34 cm strip of W-S BAND is applied as a finish. covering the joint, leaving a gusset of about 2 cm centred on the joint and overlapping on each side on the sheet of the skirts. This gusset can also be made with the help of an expanded bead centred between the bands.



» Catch basins

The catch basin must have a wing on the top edge and be made of PVC or metal.

- Cut out a square of about 50 cm on the side
- Apply W-S MASTIC sealant adhesive or similar on the catch basin wing.
- Apply cement around the bowl on the surface to be covered with the piece.
- Glue the WATER-STOP piece. First press firmly inward on the putty in the wing area. Then towards the edges of the quadrant around the bowl.
- Make several star-shaped cuts starting in the centre until you reach the diameter of the catch basin mouth. Fold inward and glue with putty.
- Then fit the flange pressure foot if the catch basin has it, otherwise, place a heavy item to press on it during the curing time*.

- When performing the general installation of the sheet use W-S MASTIC sealant adhesive or EASEAL waterproof elastic cement or similar to glue the sheet on the reinforcement.
- Once the general installation of the sheet is complete, finish the delivery of the membrane to the reinforcement: With the help of a cutter or scissors trim following the perimeter of the opening along the inside. Glue and seal the edge of the joint with sealant adhesive.

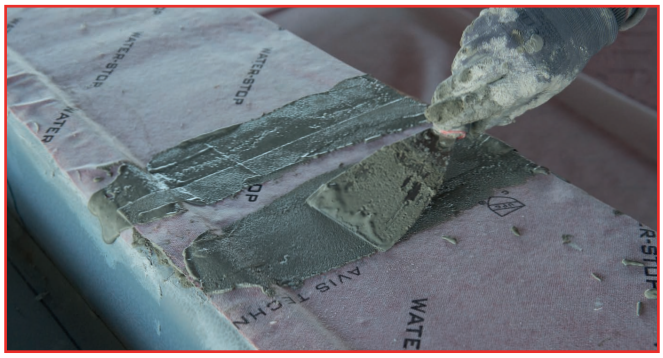
***Note:** This reinforcement system requires special care since the gluing is not immediate and during the setting time of the adhesives (putty and cement) it is necessary to prevent any tensions or movements that could damage the watertight seal.

» Gutters

If the evacuation of water is achieved with a gutter, it must have a wing at least 10 cm wide at the top edge.

Waterproofing should be extended at least 10 cm above the wings. The joint of the waterproofing sheet with the gutter can be done with W-S MASTIC elastic sealing adhesive putty or similar.

When the gutter is attachezd to a vertical wall, the wing of the gutter of the part where it meets it must rise through the wall and a waterproofing band must be fitted. covering the upper edge of the wing, extending up to at least 20 cm above the roof protection.



» Overflows

A reinforcement of the waterproofing should be carried out around the mouth of the overflow and extending for no less than 10 cm. For this purpose, a special part can be used or a reinforcement piece with WATER-STOP membrane can be made on site as follows:

- Cut a piece of WATER-STOP of the appropriate dimensions as per the mouth of the overflow and apply it fixing it with W-S MASTIC sealant adhesive, with waterproof cement and EASEAL elastic or similar.

- With the help of a cutter make several star-shaped cuts from the centre to the edges of the mouth, fold and glue the reinforcement inwards with W-S MASTIC sealant adhesive or similar.

Meeting of the roof with the side edge

If the finish has been fitted with an angular profile, its horizontal wing must have a width greater than 10 cm. Waterproofing should extend at least 10 cm above the horizontal wing. The joint of the waterproofing sheet with the profile must be watertight. It can be made with W-S MASTIC elastic sealing adhesive putty applied as described on the points.

If a finishing profile has not been fitted, the meeting must be carried out by prolonging the waterproofing at least 7 cm on the front of the eaves, gluing it with cement to the edge. On the front, glue and seal with elastic waterproof cement or with W-S MASTIC elastic sealing adhesive putty .

In any case, the prolongation of the waterproofing on the front of the wing or the wall must be protected from exposure to light. If this is not possible, waterproofing with WATER-STOP should be carried out within the limit of the protected area and completed with a butyl putty end band protected with aluminium.

Anchoring elements

Anchors of elements must be made on a vertical wall above the finish of the waterproofing. If they are to be carried out on the horizontal part of the roof, a protective element must be fitted in a manner similar to that established for meeting points with elements that pass through it or on a bench supported on it.

WATER-STOP

Description: Plastic membrane (EVA C) with non woven on both sides, for outdoor and indoor waterproofing.

Installation: Under tiling and bonded by thin-set mortar.

Normative References: EN 13956:2013

Manufacturer: Estil Gurú S.L.U. **Factory code:** 966-J

CHARACTERISTICS	METHOD	UNIT	TOLERANCE	VALUE
Watertightness	EN 1928	-	-	Pass
Reaction to fire	EN 13501-5	class	-	E
Tensile strength (MD // CMD) * 1				
Maximal tensile force (MD // CMD)	EN 12311-2 (A)	N/50 mm	-	≥200 // ≥200
Elongation (MD // CMD)	EN 12311-2 (A)	%	-	≥50 // ≥80
Resistance to root penetration				NDP
Resistance to static loading	EN 12730 (B)	Kg	-	≥20
Resistance to impact	EN 12691 (A)	mm	-	≥500
Resistance to tearing (MD // CMD)	EN 12310-2	N	-	≥75 // ≥100
Join resistance				
Join peeling resistance	EN 12316-2	N/50 mm	-	NDP
Join shear resistance	EN 12317-2	N/50 mm	-	≥230
Flexibility at low temperature	EN 495-5	ºC	-	-20
UV stabilization	EN 1927	class	-	NDP

*1 **Test direction: MD - Machine Direction // CMD – Cross Machine Direction**

Additional information

Visible defects	EN 1850	m	-	Pasa
Length	EN 1848-2	m	+5%	5 // 20 // 30
Width		m	-0,5% // +1%	1 // 2
Mass per unit of surface	EN 1849-2	g/m2	-10 // +15	270
Thickness		mm	-0,03 // +0,06	0,57
Rectitude	EN 1848-2	mm	-	≤10
Flatness		mm	-	≤10
Dimensional Stability	EN 1107-2	%	-	≤2
Water vapour transmission properties:				
Humidity resistance factor (μ)	EN 1931 (B)	-	-30% // +30%	8.039
Vapour diffusion (sd value)	EN 1931 (B)	m	-30% // +30%	3,2
Water vapour diffusion resistance (Z)	-	MN·s/g	-	16

Barrier against vapour according to C T E requirements - DB HS 1 (Z > 10 MN·s/g)

WARRANTY

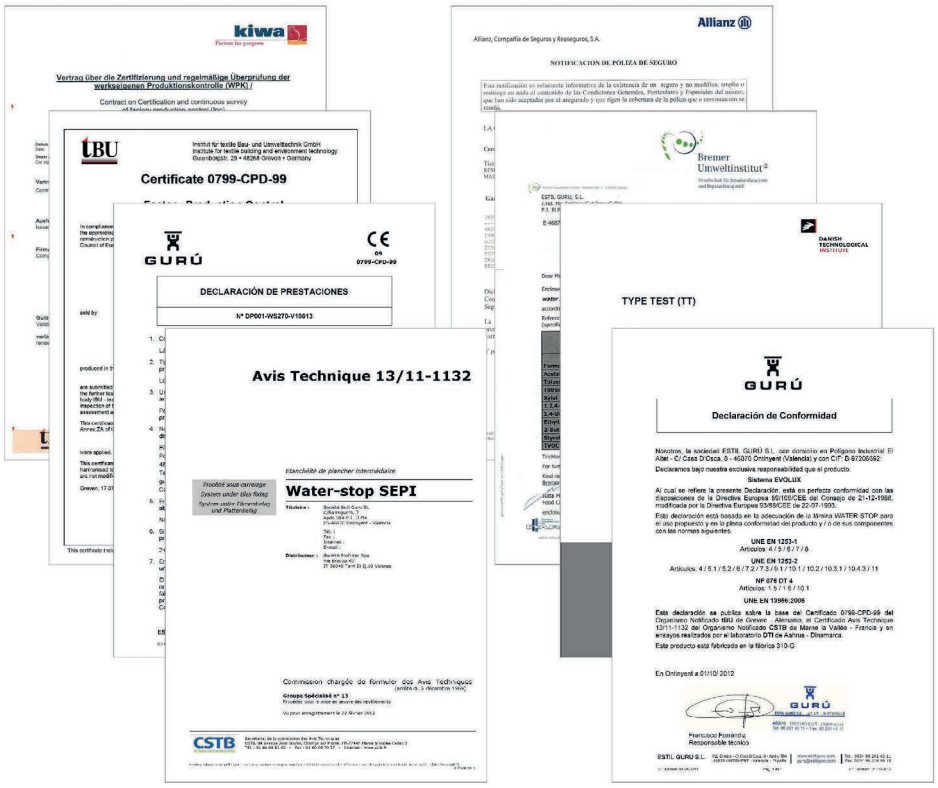
Estil Gurú S.L.U. as a manufacturing company of waterproofing systems guarantees the quality and performances of its products.

Estil Gurú, S.L.U. guarantees that **WATER-STOP** waterproofing membranes meet the technical and regulatory specifications that are applicable, specifically those derived from the standard UNE EN 13956:2012.

WATER-STOP membranes have the CE marking in compliance with the standard UNE EN 13956:2013 and produce a minimum level of VOCs (volatile organic compounds).

The suitability of WATER-STOP membranes for the proposed use in waterproofing floors with water evacuation is certified by the Technical Suitability Document - Avis Technique No. 13/14-1258 issued by the French notified body the CTSB.

WATER-STOP membrane waterproofing systems come with a 10-year manufacturer's warranty certificate backed by a civil liability Insurance Policy.



Supporting documents, declarations and certifications are available in the download section of the website www.estilguru.com and can be requested by email from our customer service department at: **atencionalcliente@estilguru.com**

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