



MAPEGUARD WP 90 MAPEGUARD WP 140 MAPEGUARD WP 200

Sheet membranes

TECHNICAL MANUAL





Mapeguard WP 90 Mapeguard WP 140 Mapeguard WP 200 Sheet membranes

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Products included

Mapeguard WP 90/Mapeguard WP 140/ Mapeguard WP 200 sheet membranes

TYPE OF PRODUCT	PRODUCT	THICKNESS	VAPOUR DENSITY
Sheet membrane	Mapeguard WP 90	0,34	Sd > 40,3 m
Sheet membrane	Mapeguard WP 140	0,37	Sd > 76,0 m
Sheet membrane	Mapeguard WP 200	0,48	Sd > 110,0 m

ADHESIVE FOR SHEET MEMBRANE	PRODUCT	CONSUMPTION	READY FOR TILE INSTALLATION
Adhesive	Mapeguard WP Adhesive	0,8 kg/m ²	5 hours
Alternative adhesive	Mapectex MS45		

SEALS	PRODUCT	SIZE
Sealing tape	Mapeguard ST	12 cm x 10 / 30 m
	Mapeband Easy	13 cm x 10 / 30 m
Internal corner	Mapeguard IC	
	Mapeband Easy internal Angle 90°	
External corner	Mapeguard EC	
	Mapeband Easy External Angle 270°	
Pipe collar	Mapeguard PC 10–24 mm	10 – 24 mm
	Mapeguard PC 15–38 mm	15 – 38 mm
	Mapeguard PC 32–55 mm	32 – 55 mm
	Mapeguard PC 50–75 mm	50 – 75 mm
	Mapeguard PC 75–110 mm	75 – 110 mm
	Mapeguard PC 100–130 mm	100 – 130 mm
	Mapeguard WC 30x45 cm	30 x 45 cm
Drain collar	Mapeband B DC	37 x 37 cm
Drain collar, long	Mapeband B DC L	37 x 120 cm
Butylic tape	Mapeband B T	12 cm x 20 m



Conditions for use

Vapour density

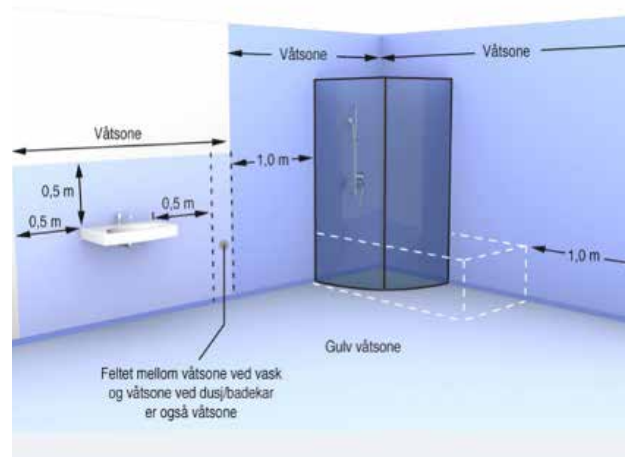
Mapeguard WP 90/Mapeguard WP 140/ Mapeguard WP 200 membrane system provides a vapour density of $S_d > 40.3$ m for **Mapeguard WP 90**, $S_d > 76.0$ m for **Mapeguard WP 140** and 110.0 m for **Mapeguard WP 200**. On walls and floors where the wet zone adjoins an outdoor environment or spaces with limited heating, the required vapour density is $S_d > 10$ m. Mapeguard WP 200, with an S_d of over 110 m, also satisfies the requirement as a membrane in swimming pool halls with a vapour density requirement of $S_d > 50$ m.

Installing the membrane

Wetroom membrane must be applied in all wet zones.

It is recommended that the membrane system is applied to flooring and all walls and transitions in the wetroom in order to ensure compliance with requirements for membrane and vapour density.

For product documentation in accordance with DIBK requirements, Technical approval from **Sintef TG 20575** applies. This can be downloaded from mapei.no or from Sintef's website. **TG 20575** contains all current products and conditions for use.



Source: TEK17, dibk.no



Installing Mapeguard WP sheet membrane

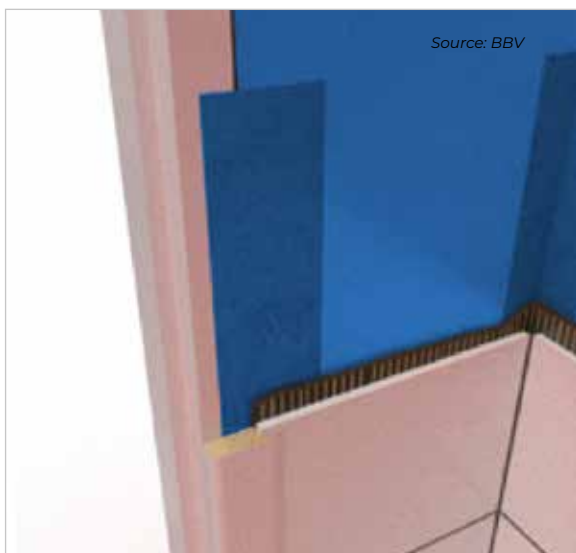
Sealing to a threshold

When sealing to a threshold, **Mapeguard WP membrane system** can be folded up to the level of the pre-laid floor. Alternatively, the up-fold from the membrane on the floor can be achieved using **Mapeband B T** butyl tape or **Mapeguard ST/Mapeband Easy**. Installation is as described for other surfaces.



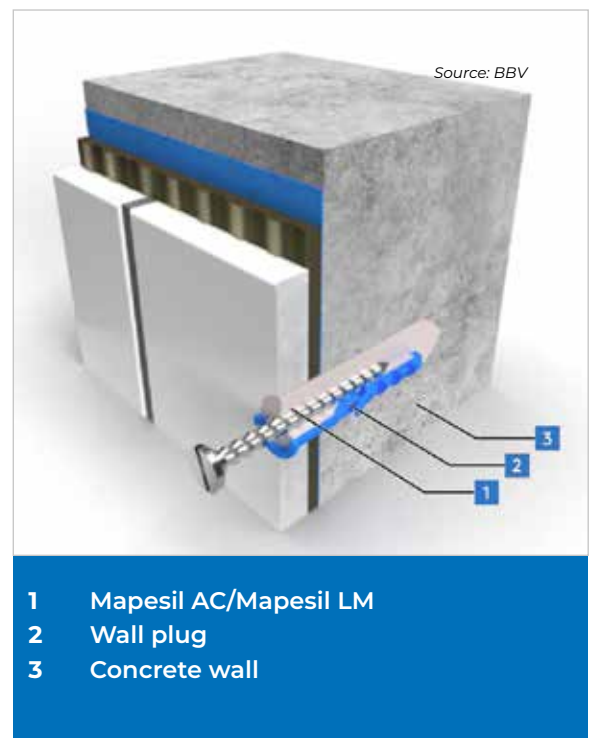
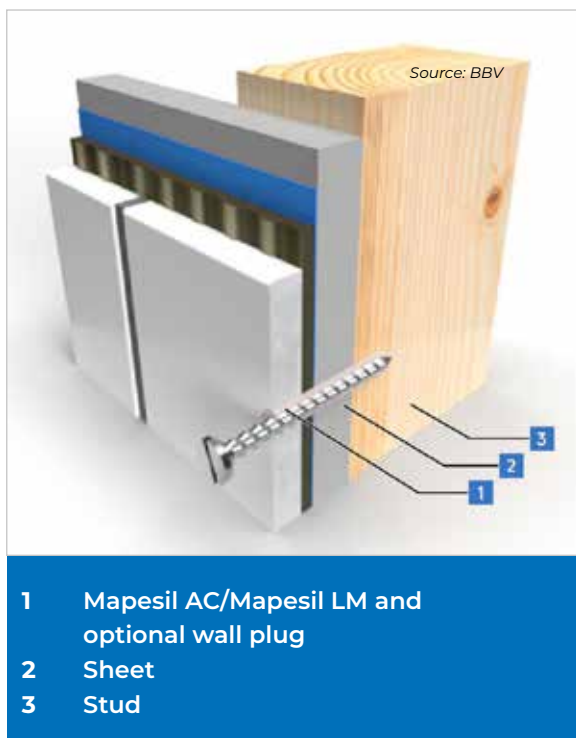
Transitions between walls and frames

The door frame should be flush with the substrate for the membrane; see illustration. Thresholds and frames must be fitted before **Mapeguard WP 90/WP 140/WP 200** membrane system is installed. Sealing to a frame can be done in the same way as to a threshold by joining using **Mapeband B T** butyl tape or **Mapeguard ST/Mapeband Easy** sealing tape, or by overlapping using **Mapeguard WP 90/WP 140/WP 200** membrane.



Sealing installations in a completed wetroom

All holes for subsequent installations need to be sealed by filling the wall plug and the drilled hole with **Mapesil AC** or **Mapesil LM** when installing the screw.



Requirements



The moisture content of the concrete substrate must be no more than 85% RH when applying the membrane.

The substrate must be clean and dry before application. Major cracks, areas of damage and depressions at screws must be repaired using filler beforehand. Loose particles, grease and oil must be removed from the substrate.

Remove cement laitance and any curing membrane from concrete substrate. Prepare the surface by grinding or blasting and vacuum-cleaning.



The substrate must always be vacuum-cleaned after preparation and before the product is applied.



Check that falls to drains are correct and that the floor does not have any depressions where water can accumulate.



Check that all pipe penetrations are firm and project at right angles from the wall or floor.

Grunning med primer – 2 alternativer



Primer G – for absorbent substrates (concrete, screed, plaster and filler). Dilute with water depending on the substrate and apply using a roller or a brush.



Eco Prim T Plus – suitable for most types of substrate and ready for application using a roller or a brush.

Transitions to drains

1



Remove the drain's clamping ring. Position the knife base or cutting template if provided with the drain.

2



Remove half the backing from the **Mapeband B DC** or **Mapeband B DCL** drain collar and stick down the exposed part half over the drain, with the collar centred over the drain.

3



Remove the rest of the backing and stick the remainder of the **Mapeband B DC** or **Mapeband B DCL** down over the drain. Make sure the drain collar is stuck down flat and that there are no air pockets.

Transitions to drain variants are described in separate installation instructions.

Preparing for installing the membrane

1



Measure the surfaces to be sealed using the membrane and cut out appropriately sized pieces of **Mapeguard WP 90/WP 140/WP 200**. It might help to try out the membrane in place before sticking it down in order to make better use of the time after mixing the adhesive. Make sure there are no joins over the drain. Cut out holes for all pipe penetrations.

2



Apply **Mapeguard WP 90/WP 140/WP 200** using cementitious two-component adhesive **Mapeguard WP Adhesive**.

3



Pour powder into a clean bucket. Add part of component B, mix into the powder then add the remainder. Using a drill with a whisk, mix at low speed for 2–3 minutes until the mixture is consistent and free from lumps.

4



Scrape the edge of the mixing bucket to ensure all the material is mixed.

To make the adhesive easier to apply with a roller and brush, 5% water by weight can be added to component B, i.e. approx. 150 ml per set of **Mapeguard WP Adhesive**.

Installing membrane on walls and floors

1



Before applying **Mapeguard WP Adhesive**, you need a roller for large areas, a brush for details and a mason's trowel.

2



Apply **Mapeguard WP Adhesive** to the surface that is to be covered.

3



Do not apply adhesive to a surface larger than you can apply **Mapeguard WP 90/WP 140/WP 200** to within 15 min.

Installing membrane – Method A: overlapping

1



Mapeguard WP 90/WP 140/WP 200 can be folded in order to overlap the membrane in corners. The membrane must be folded so that all overlaps are at least 5 cm.

2



Install **Mapeguard WP 90/WP 140/WP 200** so that there is an edge of at least 5 cm projecting from all corners. **Mapeguard WP 90/WP 140/WP 200** has a dashed edge line indicating 5 cm.

3



Press out all air pockets and scrape off surplus adhesive.

4



The illustration shows how to spread membrane around an internal corner in order to ensure an overlap of at least 5 cm without cutting the membrane and using a corner piece.

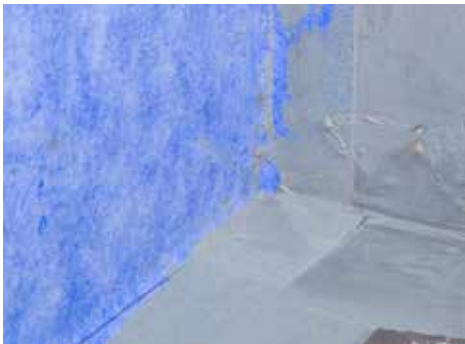
Installing membrane – Method A: overlapping

5



Ensure the membrane is completely coated in adhesive and that folds in corners are glued together.

6



Folded and glued membrane in an internal corner.

7



The membrane has an edge line that indicates the minimum overlap of 5 cm. An overlap must be on or within this line.

8



Install the next sheet with sufficient overlap.

Montering av folie – Metode A: Overlapping

9



When installing the membrane, all air pockets and surplus adhesive must be pressed out using a suitable tool without a sharp edge that might damage the membrane.



10



Scrape off any surplus adhesive.



11



Installed **Mapeguard WP 90/WP 140/WP 200** on walls using overlapping. Ready for installing the floor.



12



Apply **Mapeguard WP Adhesive** to the floor right up to the wall on the folded corners of the wall sheet.



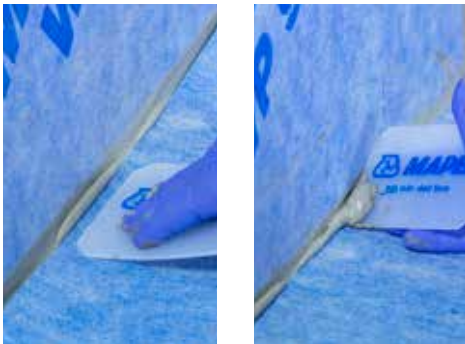
Installing membrane – Method A: overlapping

13



Apply **Mapeguard WP 90/WP 140/WP 200** to the floor with a sufficient overlap (5 cm) over the membrane on the walls.

14



Press out any air pockets and scrape off surplus adhesive.

15



Installed **Mapeguard WP 90/WP 140/WP 200** with overlapping to walls and floor.

Installing membrane – Method A: **OBSERVE!**

1



If installing **Mapeguard IC/Mapeband Easy Internal Angle** in internal corners and **Mapeguard EC/Mapeband Easy External Angle** in external corners using method A, the membrane can be cut to size around the corners. Installation of **Mapeguard IC/Mapeband Easy Internal Angle/Mapeguard EC/Mapeband Easy External Angle** is described under method B.

2



When installing **Mapeguard IC/Mapeband Easy Internal Angle/Mapeguard EC/Mapeband Easy External Angle**, the membrane does not have to be folded in the corners. Instead it can be trimmed as illustrated. The required overlap is then provided by the corner piece.

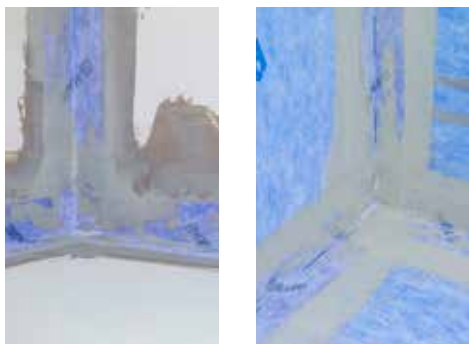
Installing membrane – Method B: Joins beneath Mapeguard WP membrane

1



Mapeguard WP 90/WP 140/WP 200 can also be installed without overlaps by joining it using **Mapeguard ST/Mapeband Easy** sealing tape and **Mapeguard IC/Mapeband Easy Internal Angle** and **Mapeguard EC/Mapeband Easy External Angle** in internal and external corners. When using this method, you should start by cutting out suitable lengths of **Mapeguard ST/Mapeband Easy**.

2



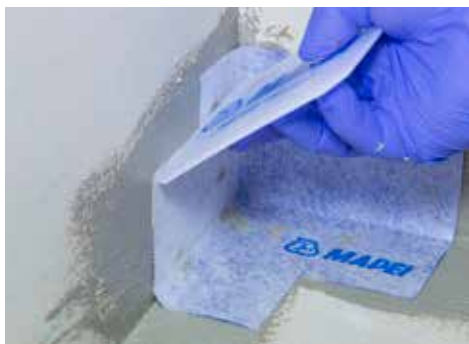
Details such as corners, transitions and pipe penetrations can be sealed before (method B) or after (method C) installing the **Mapeguard WP 90/WP 140/WP 200** membrane on walls and floors.

3



Apply **Mapeguard WP Adhesive** in the corner, ensuring that all of the reverse side of the corner piece is coated with adhesive.

4



Install **Mapeguard IC/Mapeband Easy Internal Angle** in internal corners and press out all air pockets and scrape off surplus adhesive. Seal external corners in the same way using **Mapeguard EC/Mapeband Easy External Angle**.

Installing membrane – Method B: Joins beneath Mapeguard WP membrane

5



Påfør **Mapeguard WP Adhesive** og monter ferdig kappede lengder av **Mapeguard ST/Mapeband Easy** i overganger mellom vegg og gulv.

6



Sørg for at den stiplede midtlinjen sammenfaller med hjørnet. På hver side vil da 6 cm tettebånd stikke ut slik at minstekravet om overlapping blir ivaretatt.

7



Press ut luftlommer og skrap av overflødig lim.

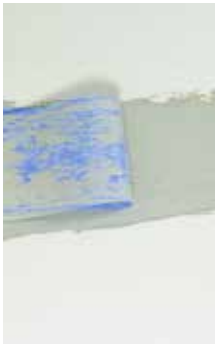
8



Monter **Mapeguard ST/Mapeband Easy** på samme måte i overganger mellom vegger.

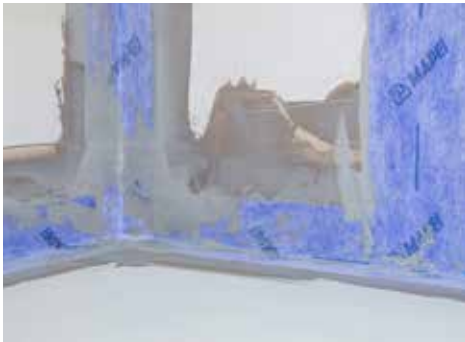
Installing membrane – Method B: Joins beneath Mapeguard WP membrane

9



Any joins in the substrate can also be sealed using **Mapeguard ST/Mapeband Easy**. Make sure the centre line is over the join.

10



Once all corners, transitions and joins have been sealed, install **Mapeguard WP 90/WP 140/WP 200** over the remainder of the substrate. Be sure to lay all sheets up to the middle of all sealing sections so as to obtain an overlap of at least 5 cm.

Installing membrane – Method C: Joins over Mapeguard WP membrane

1



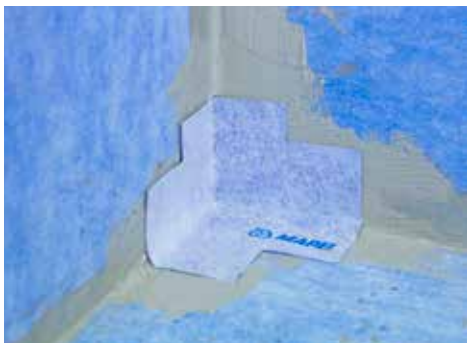
When installing sealing sections over **Mapeguard WP 90/WP 140/WP 200** membrane, start by installing the sheet sections next to each other without any overlapping or spaces.

2



Apply adhesive to **Mapeguard WP 90/WP 140/WP 200** in the corners.

3



Install **Mapeguard IC/Mapeband Easy Internal Angle** in internal corners and **Mapeguard EC/Mapeband Easy External Angle** in external corners over the membrane. Press out any air pockets and scrape off surplus adhesive.

4



Apply adhesive to the transition between two sheets of **Mapeguard WP 90/WP 140/WP 200**.

Montering av folie – Metode C: Skjøting over Mapeguard WP-folie

5



Install **Mapeguard ST/Mapeband Easy** at the transition with the dashed line directly over the join.

6



Press out any air pockets and scrape off surplus adhesive.

7



Finish all transitions.

8



Also install **Mapeguard ST/Mapeband Easy** over all joins between sheets of **Mapeguard WP 90/WP 140/WP 200** on the same surface. Make sure that the centre line is directly over the join.

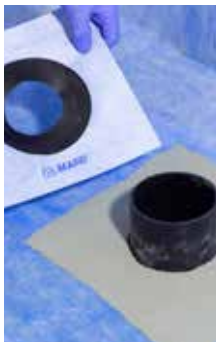
Sealing pipe penetrations

1



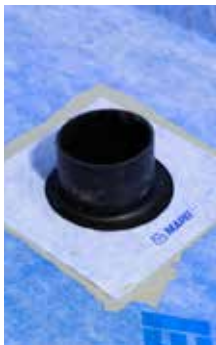
Check that all pipes are firmly in place and projecting at right angles from the floor or wall, and that there is a max. 2 mm gap between the wall/floor substrate and the pipe. Larger holes should be sealed using **Mapeflex MS45**.

2



Install a **Mapeguard PC** pipe collar of the correct size and apply **Mapeguard WP Adhesive**. Make sure that the back of the pipe collar is fully coated in adhesive.

3



Press the collar into the adhesive and scrape off any surplus adhesive.

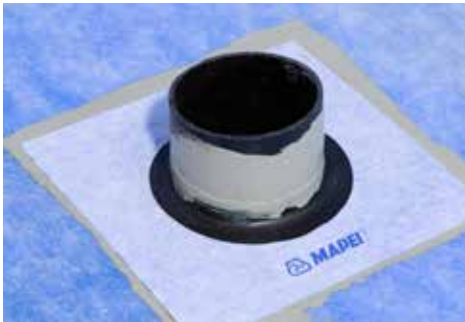
4



Apply **Mapeguard WP Adhesive** around the transition where the collar's rubber ring fits around the pipe.

Sealing pipe penetrations

5



Complete sealing of a Ø110 mm pipe.

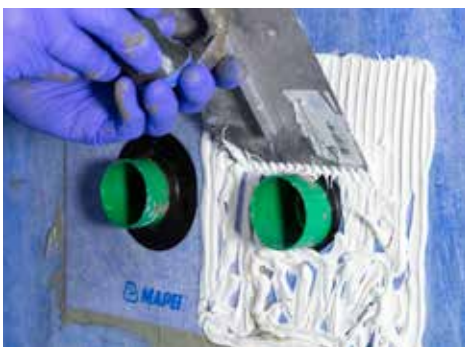
Sealing pipe penetrations using alternative ready-to-use adhesive

1



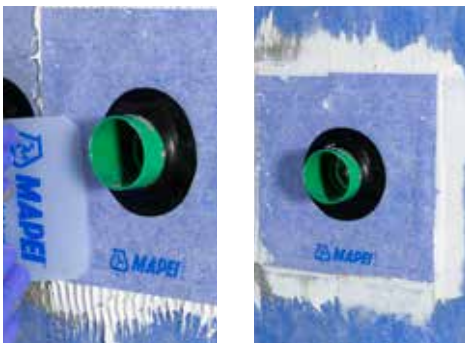
All Mapeguard seals can be glued using **Mapeguard WP Adhesive** or the single-component adhesive **Mapeflex MS45** in a gun. **Mapeflex MS45** is ready for use and is particularly useful if you find that a part is missing or has to be replaced, or if you find any damage to installed membrane that needs to be repaired. **Mapeflex MS45** can also be used to stick down overlaps between **Mapeguard WP 90/WP 140/WP 200** sheets.

2



Apply beads of adhesive beneath the relevant sealing component (the illustration shows a **Mapeguard PC** pipe collar). Spread the adhesive using an adhesive trowel.

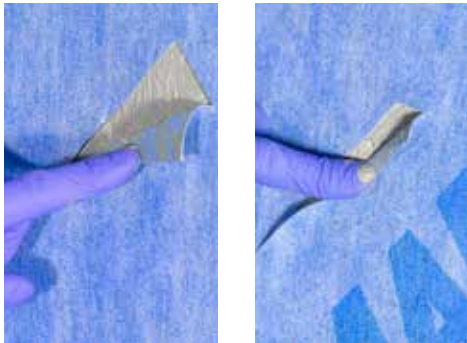
3



Press the sealing collar onto the adhesive. Press out any air pockets and scrape off surplus adhesive.

Repairing damage

1



Damage to the membrane can be easily repaired by seaming using a piece of **Mapeguard WP 90/WP 140/WP 200** or **Mapeguard ST/Mapeband Easy**.

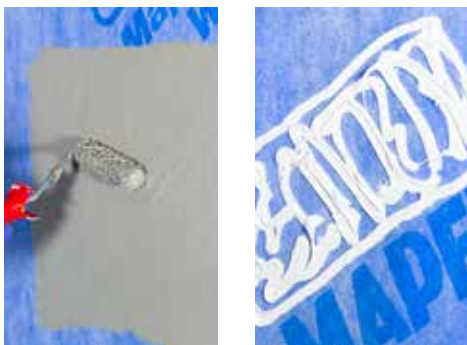
Mapeguard WP 90/WP 140 can be repaired using **Mapeguard WP 200** and vice versa.

2



Cut a suitable piece of **Mapeguard ST/Mapeband Easy** or a sheet of **Mapeguard WP 90/WP 140/WP 200** to size. Make sure the membrane covers an area of at least 5 cm measured from the edge of the damaged area.

3



Apply **Mapeguard WP Adhesive** or **Mapeflex MS45** over the damaged area.

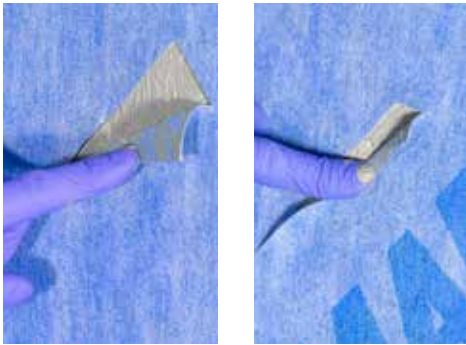
4



Mapeflex MS45 needs to be spread out and sprayed lightly with water to make the curing time quicker.

Repairing damage

5



Apply the membrane to the damaged area. Press out any air pockets and scrape off surplus adhesive. Check that the overlap is wide enough.



Checking after installation

1



This is what a wetroom might look like after installing **Mapeguard WP sheet membrane system** using methods A and B. Check that the job has been completed properly, in particular that:

- All joins overlap by at least 5 cm.
- The membrane is intact and any damaged areas have been repaired.
- All transitions and pipe penetrations are sealed.

It may be a good idea to take pictures of the sealing layer after installation.

2



Example of a wetroom after installing **Mapeguard WP sheet membrane system** using method C. Check that the job has been completed properly.

Transition to Purus drain with screwed-down clamping ring

1



Check that the drain is installed at the same level as the membrane layer. Unscrew the clamping ring and check that the o-ring is correctly installed beneath the clamping ring.

2



If the drain comes with a Purus knife base, install this in the drain.

3



Apply a **Mapeband B DC** drain collar and the **Mapeguard WP system** as described previously. Make sure no joins in the membrane run over the drain. Install a knife base if required.

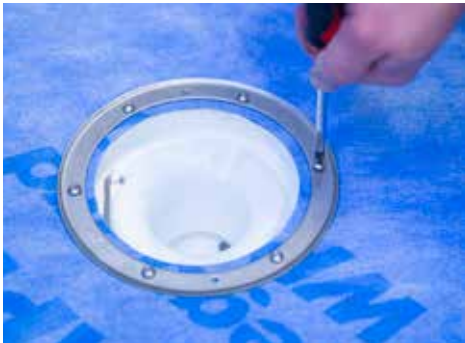
4



Cut a hole in the membrane over the drain.

Transition to Purus drain with screwed-down clamping ring

5



Apply the clamping ring over the membrane. Use a pricker to make holes for the screws and screw them in using a screwdriver.



6



Make sure that the edge of the membrane and the drain collar are visible beneath the clamping ring.

Transition to Purus drain with press-on clamping ring

1



Check that the drain is installed at the same level as the membrane layer. Remove the clamping ring.

2



If necessary, place a knife base in the drain.

3



Apply a **Mapeband B DC** drain collar and the **Mapeguard WP system** as described previously. Make sure no joins in the membrane run over the drain. Install a knife base if required.

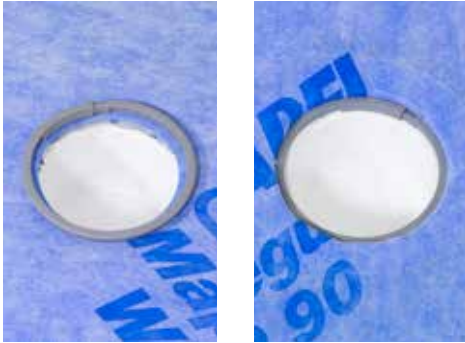
4



Cut a hole in the membrane over the drain.

Transition to Purus drain with press-on clamping ring

5



Press the clamping ring down into the drain over the membrane.

For other drain variants, see specific installation instructions.

EVERYTHING'S OK WITH MAPEI



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