WATERPROOFING DETAILS
SIKA TILE INSTALLATION SYSTEMS
INTERNAL & EXTERNAL AREAS
## CONTENTS

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DRAWING DETAILS FOR INTERNAL WET AREAS PER AS 3740 [2004]
## TABLE 4.1
GENERAL REQUIREMENTS FOR EXTENT OF APPLICATION

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<tr>
<th>Vessels or area where the fixture is installed</th>
<th>Floors and horizontal surfaces</th>
<th>Walls</th>
<th>Wall junctions and joints</th>
<th>Penetrations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shower area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosed and hobbed</td>
<td>Waterproof entire enclosed shower area, including hob (see Figure 4.3(a))</td>
<td>Waterproof to 150 mm min. above the shower floor substrate or 25 mm min. above the maximum retained water level and the remainder to be water resistant to a height of 1800 mm min. from finished floor level (see Figure 4.3(a))</td>
<td>Waterproof internal and external corners and horizontal joints within a minimum height of 1800 mm. above the floor level with a minimum width of 40 mm either side of junction (see Figure 4.3(a))</td>
<td>Seal all penetrations</td>
</tr>
<tr>
<td>Enclosed and hobless</td>
<td>Waterproof entire enclosed shower area including water stop</td>
<td>Waterproof to 150 mm min. above the shower floor substrate and the remainder to be water resistant to a height of 1800 mm min. from finished floor level (see Figure 4.3(a))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosed and stepped down</td>
<td>Waterproof entire enclosed shower area including the stepdown</td>
<td>Waterproof to 150 mm min. above the shower floor substrate or 25 mm min. above the maximum retained water level and the remainder to be water resistant to a height of 1800 mm min. from finished floor level (see Figure 4.3(a))</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosed and preformed shower base</td>
<td>N/A</td>
<td>Water resistant to a height of 1800 mm min. from finished floor level (see Figure 4.3(a))</td>
<td>Waterproof internal and external corners and horizontal joints to a minimum height of 1800 mm. above the floor level with a minimum width of 40 mm either side of junction (see Figure 4.3(a))</td>
<td>Seal all penetrations</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Vessels or area where the fixture is installed</th>
<th>Floors and horizontal surfaces</th>
<th>Walls</th>
<th>Wall junctions and joints</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Unclosed</td>
<td>Waterproof entire shower area (see Figure 4.3(b))</td>
<td>Waterproof to 150 mm min. above the shower floor substrate or 25 mm min. above the maximum retained water level and the remainder to be water resistant to a height of 1800 mm min. from finished floor level (see Figure 4.3(b))</td>
<td>Waterproof internal and external corners and horizontal joints to a minimum height of 1800 mm. above the floor level with a minimum width of 40 mm either side of junction (see Figure 4.3(b))</td>
<td>Seal all penetrations</td>
</tr>
<tr>
<td>Areas outside the shower area for concrete and compressed fibre cement sheet flooring</td>
<td>Water resistant to entire floor</td>
<td>N/A</td>
<td>Waterproof all wall to floor junctions, where a flashing is used the horizontal leg shall be a minimum of 40 mm</td>
<td>N/A</td>
</tr>
<tr>
<td>Areas outside the shower area for timber floors including particleboard, plywood and other flooring materials</td>
<td>Waterproof entire floor</td>
<td>N/A</td>
<td>Waterproof all wall to floor junctions, where a flashing is used the horizontal leg shall be a minimum of 40 mm</td>
<td>N/A</td>
</tr>
<tr>
<td>Areas adjacent to baths and spas** for concrete and compressed fibre cement sheet flooring</td>
<td>Water resistant to entire floor</td>
<td>Water resistant to a height of 150 mm min. above vessel and exposed surfaces below vessel lip to floor level* (see Figure 4.1)</td>
<td>Seal edges for extent of vessel and junction of bath enclosure with floor. Where the lip of the bath is supported by a horizontal surface this area shall be waterproof for showers over bath and water resist for all other cases (see Figure 4.1)</td>
<td>Seal all tap and spout penetrations where they occur in a horizontal surface</td>
</tr>
<tr>
<td>Areas adjacent to baths and spas** for timber floors including particleboard, plywood and other flooring materials</td>
<td>Waterproof entire floor</td>
<td>Water resistant to a height of 150 mm min. above vessel and exposed surfaces below vessel lip to floor level*(see Figure 4.2)</td>
<td>Seal edges for extent of vessel and junction of bath enclosure with floor. Where the lip of the bath is supported by a horizontal surface this area shall be waterproof for showers over bath and water resist for all other cases (see Figure 4.2)</td>
<td>Seal all tap and spout penetrations where they occur in a horizontal surface</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Vessels or area where the fixture is installed</th>
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<th>Wall junctions and joints</th>
<th>Penetrations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insert baths</strong></td>
<td>N/A for floor under the bath</td>
<td>N/A for wall under the bath</td>
<td>N/A for wall under the bath*</td>
<td>Seal all tap and spout penetrations where they occur in a horizontal surface</td>
</tr>
<tr>
<td>Waterproof entire shelf area, incorporating a waterstop under the bath lip and project a minimum of 5 mm above the tile surface (see Figure 5.2(c))</td>
<td>Waterproof to 150 mm min. above the lip of the bath*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Walls adjoining other vessels (e.g., sink, basin or laundry tub)</strong></td>
<td>N/A</td>
<td>Water resistant to a height of 150 mm min. above vessel if the vessel is within 75 mm min. of the wall (see Figure 4.4)</td>
<td>Where the vessel is fixed to a wall, seal edges for extent of vessel</td>
<td>Seal all tap and spout penetrations where they occur in a horizontal surface</td>
</tr>
<tr>
<td><strong>Laundries and WCs</strong></td>
<td>Water resistant to entire floor</td>
<td>Seal all wall to floor junctions with a skirting or flashing to 25 mm min. above the finished floor level, sealed to the floor</td>
<td>Waterproof all wall to floor junctions, where a flashing is used the horizontal leg shall be a minimum of 40 mm</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Bathrooms and laundries requiring a floor waste in accordance with Volume One of the BCA</strong></td>
<td>Waterproof and drain entire floor</td>
<td>N/A.</td>
<td>Seal all wall to floor junctions with a skirting or flashing to 25 mm min. above the finished floor level, sealed to the floor</td>
<td>Waterproof where through the floor, otherwise N/A</td>
</tr>
</tbody>
</table>

LEGEND:
N/A = not applicable

* If a shower is included in a bath refer to the requirements for shower area walls and penetrations

† Does not apply to joinery fittings such as vanities
4.1 Extent of treatment for wet areas - shower area over bath - enclosed shower - for concrete and compressed fibre cement sheet flooring.

Drawing details for internal wet areas per AS 3740 - 2004.
4.2 Extent of treatment for wet areas - shower area over bath - unenclosed shower - for timber floors including particleboard, plywood and other flooring materials.

Drawing details for internal wet areas per AS 3740 - 2004.
4.3 Extent of treatment for shower areas - concrete and compressed fibre cement sheet.

*Drawing details for internal wet areas per AS 3740 - 2004.*

**Waterproof corner to 1800 mm height from finished floor level with Sika® SealTape-S / Sika® Joint Bandage**

**Waterproof walls with SikaLastic®-220 W**

**Waterproof floor with SikaLastic®-152 / SikaLastic-220 W**

**Waterproof floor with SikaLastic®-152**

**Minimum extent of waterproofing**

**Height as per Table 4.1**

**DIMENSIONS IN MILLIMETRES**

(a) Enclosed shower

(b) Unenclosed showers—Concrete and compressed fibre cement sheet floors
4.4 Section through bath extent of treatment for wet areas - baths and other vessels.

Drawing details for internal wet areas per AS 3740 - 2004.

(a) Vessel abutting wall

(b) Wall/bath junctions
5.1 Typical preformed shower base junctions.

*Drawing details for internal wet areas per AS 3740 - 2004.*

**BATHS & SPAS**

Baths and spas shall be supported to prevent distortion and cracking. Baths and spas recessed into the wall shall be installed to allow the water-resistant surface materials of the wall to pass down inside the rim of the bath or spa (see Figures 5/2(a) and 5.2(b)). When installing baths and spas, the integrity of the structure shall be maintained.

![Diagram of typical preformed shower base junctions](image-url)
5.2 Typical bath junction.

Drawing details for internal wet areas per AS 3740 - 2004.

Waterproof with Sikalastic®-220 W

(a) Bath/shelf junction-recessed

Waterproof with Sikalastic®-220 W

(b) Bath/shelf junction-battened

Waterproof sealant: Sikasil® Color

Water stop under bath lip to project a minimum of 5 mm above the tile surface

Membrane: Sikalastic®-152/ Sikalastic®-220 W

(c) Bath/shelf junction

Water-resistant surface material of the wall

Bath

Wall rebated to accommodate rim of bath

Waterproof sealant Sikasil® Pool

Sikasil® Pool

Sikasil® Color

Sika® SealTape-S / Sika® Joint Bandage

Mortar tile bed

Water stop

Bath

Floortile

Sika® Pool

P8

Sika® Pool
5.3 Typical bathroom door detail for whole bathroom waterproofing.

Drawing details for internal wet areas per AS 3740 - 2004.

- Waterproof membrane a min. of 25 mm above the finished floor surface using Sikalastic®-152 / Sikalastic®-220 W with Sika® SealTape-S / Sika® Joint Bandage to all junctions.

(a) After installation of architrave

(b) Prior to installation of architrave
DRAWING DETAILS FOR EXTERNAL WET AREAS
56  Falls in membrane roofs and decks

Notes: Refer to Figure 62 for thresholds and clearances. Junction saddle flashing - refer figure 13.

**DECK**

Door or window frame opening 150 mm min. to balustrade wall cladding

Line of internal floor level

Line of base of cladding

Saddle flashing see detail

Solid balustrade see detail

Fall: 1.5°, 1:40 min.

Overflow where applicable

Gutter or low point of roof to discharge through scupper to rainwater head or roofing outlet
Place Sika® SealTape®-S at external corner and cover with Sikalastic®-152 / Sikalastic®-220 W
For membrane upstand use Sika® SealTape®-S internal corner and cover with Sikalastic®-152 / Sikalastic®-220 W.
59  Verges in membrane

- **Eave**

  - **Sikalastic®-152** membrane dressed over substrate and angle
  - **Sika® SealTape®-S** external corner
  - **Spouting**
  - **Wall cladding and wall underlay**
  - **50 x 50mm metal angle**
  - **Substrate**
62  Junctions with walls for membrane

Note: Internal corners to be formed as shown in Figure 58. Dimensions are shown to membrane, however where there is an additional material applied over the membrane, all dimensions shall apply to the highest level of the wearing surface.

- **Direct Fix Cladding**
  - Carry SikaLastic®-152 membrane up behind wall underlay and against solid framing
  - Wall structure
  - Wall offset at bottom of cladding
  - Enclosed deck structure

- **Direct Fix Threshold at Opening**
  - Dress SikaLastic®-152 membrane 100mm min. up framing at ends. Width to suit joinery and cladding
  - Air seal
  - Floor finishes
  - Frame block
  - Enclosed deck structure

- **Cavity Fixed Cladding**
  - Cladding over cavity battens
  - Carry SikaLastic®-152 membrane up behind wall underlay and against solid framing
  - Wall structure
  - Cavity base closer
  - Drip edge
  - Enclosed deck structure

- **Cavity Threshold at Opening**
  - Turn-up membrane 100 mm min. at trimmer studs
  - Floor or threshold structure
  - Air seal
  - Floor finishes
  - Sill support bar, pre-fill fixing holes with silicon sealant
  - Sill tray
  - Line of cladding beyond
  - SikaLastic®-152 membrane to be extended under sill reveal
  - 100 mm min.
RAINWATER HEAD AND SCUPPER OPENING IN MEMBRANE

Note: Use preformed scuppers where provided by the membrane supplier.

### Deck Outlet

- Continuous Siklastic®-152 dressed through opening with upper edges sealed against cladding. Return over rainwater head at sides
- 50 mm min. each side
- 200 mm min. opening
- Lip of discharge at lowest point of roof
- Rainwater head
- 75 mm min. opening
- Overflow below opening level, 1.5 x cross section area of downpipe

### Outlet through Wall

- Cavity battens with base closure and drip edge to cladding at opening
- Continuous membrane dressed through base and up sides of opening with upper edges sealed against cladding.
- Return along back of rainwater head
- Return membrane into rainwater head
- Siklastic®-152 dressed over 50x50 mm aluminium angle rebated into substrate
- 75 mm min.

### Overflow

- Refer to cladding for cavity finish
- Continuous membrane dressed through base and up sides of opening
- Siklastic®-152 membrane turned over lip
- 50x50 mm aluminium angle drip edge rebated into substrate
- 50 mm lip

### Section A - A

- Line of membrane lapped 50 mm min. behind wrap under cladding
- Outlet through wall
- Siklastic®-152 membrane roof on substrate
- 200 mm min.
64 Gutters and outlets in membrane

Typical Roof Outlet

- Rebate flange into substrate
- Low point
- Blocking to support all edges of the opening
- Minimum 75 mm roof outlet
- Proprietary roof outlet with membrane clamped by screw fixed grate or dome

Sikalastic®-152 membrane on substrate

Edge Gutter

- Minimum gutter width 300 mm
- Cladding overlap min. 50 mm
- 35 mm min.
- High point of deck
- Gutter depth min. 50 mm
- Fall
- Substrate
- Chamfer
- Fillet
- Support all edges of substrate
- Proprietary roof outlet with membrane clamped by screw fixed grate or dome

Central Gutter

- 300 mm minimum
- Gutter depth min. 50 mm
- Gutter fall min. 1:100
- Sikalastic®-152 membrane
- Proprietary roof outlet with membrane clamped by screw fixed grate or dome
## Standards for Tile Adhesives & Grouts

### Tile Adhesives

**Standard EN 12004**
This standard establishes the specifications and methods for classifying of adhesives for ceramic tile and similar material on floors and walls.

<table>
<thead>
<tr>
<th>Class</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Cement-base Adhesives</td>
<td>in powder form: to be mixed with water or some other appropriate liquid right before use</td>
</tr>
<tr>
<td>D</td>
<td>Dispersion Adhesives</td>
<td>ready-to-use pastes based on organic polymers in water dispersion</td>
</tr>
<tr>
<td>R</td>
<td>Reactive Adhesives</td>
<td>based on two or more components to be mixed before use, which sets by means of chemical reaction</td>
</tr>
<tr>
<td>Class 1</td>
<td>Normal adhesives</td>
<td>(with minimum criteria)</td>
</tr>
<tr>
<td>Class 2</td>
<td>Improved adhesives</td>
<td>(with additional criteria)</td>
</tr>
<tr>
<td>F</td>
<td>Fast setting adhesives</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Thixotropic adhesives</td>
<td>(withstand slip)</td>
</tr>
<tr>
<td>E</td>
<td>Extended (longer) open time adhesives</td>
<td></td>
</tr>
</tbody>
</table>

**Standard EN 12002**
This standard determines the transverse deformation degree (elasticity) of cement-based adhesives and grouts, and divides them into two categories.

<table>
<thead>
<tr>
<th>Class</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>Deformable product</td>
<td>with ≥ 2.5 mm deformability</td>
</tr>
<tr>
<td>S2</td>
<td>Highly deformable product</td>
<td>with ≥ 5 mm deformability</td>
</tr>
</tbody>
</table>

### Tile Grout

**Standard EN 13888**
This standard establishes the specifications and methods for classifying grouts for ceramic tiles and similar material on floors and walls. It divides the grouts into two categories:

<table>
<thead>
<tr>
<th>Class</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>Cement-based Grouts</td>
<td>in powder form, to be mixed with water or some other appropriate liquid right before use</td>
</tr>
<tr>
<td>RG</td>
<td>Reactive Grouts</td>
<td>based on two or more components to be mixed before use, which sets by means of chemical reaction</td>
</tr>
</tbody>
</table>

There are two classes of cementitious grouts (CG), depending on different additional criteria:

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>Normal grouts (with minimum criteria)</td>
</tr>
<tr>
<td>Class 2</td>
<td>Improved grouts (with additional criteria, reduced water absorption and high resistance to abrasion)</td>
</tr>
</tbody>
</table>
BRANZ APPRAISALS
Sikalastic®-152 & Sikalastic®-220 W

BRANZ APPRAISAL NO. 811 [2013]
Sikalastic-152 EXTERIOR WATERPROOFING MEMBRANE

Scan the QR Code for a copy of BRANZ Appraisal No. 811 [2013]

BRANZ APPRAISAL NO. 812 [2013]
Sikalastic-152 AND Sikalastic-220 W INTERIOR WATERPROOFING MEMBRANES

Scan the QR Code for a copy of BRANZ Appraisal No. 812 [2013]
WHO WE ARE
Sika AG, Switzerland, is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, façades). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting loadbearing structures. Sika’s product lines feature high quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.