

Parathane

Liquid waterproofing systems



Polyurethane elastomer base for application outside or inside, traffic suitable, visible or under heavy ballast (bonded or bedded tiling, slabs on pedestals, etc.)

Parathane

Parathane Liquid waterproofing systems

Parathane selection guide

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The strong points of the Parathane system

Designed to widen the Siplast waterproofing system range, the new Parathane liquid waterproofing line, polyurethane resin base, was chosen for its intrinsic performances and notable features as well as for its simple application.

The elasticity of the *in-situ* formed Parathane membrane gives it good resistance to cracking, thus eliminating the need for reinforcement in regular parts.

Along with the unique covering core (the «coating») contributing the essential part of the waterproofing function, the Parathane line is characterised in particular by:

- ▶ A line of bonding primers for optimal adaptation to all substrates, including damp substrates;
- ▶ A number of finish possibilities, meeting many aesthetic and functional needs;

▶ A choice of juxtaposable colours, providing variety and a considerable freedom in the architectural possibilities.

For Europe as a whole, the Parathane system has obtained the authorisation to use the EC Marking, due to its European Technical Approval.

For France, the Installation Manual, referred to by Qualiconsult (an independent Technical Audit Office), is the Application Technical Document.

General presentation

Liquid Waterproofing System: definition – applications

The Parathane Liquid Waterproofing Systems are systems prepared *in-situ* by cold application and full bonding, a number of coats of liquid synthetic resins that, after drying and polymerising, form a watertight covering that can withstand a certain amount of substrate cracking.

According to their composition, the Parathane Liquid Waterproofing Systems are more or less resistant and/or trafficable and can receive a surface ballast (screed, tiling, aggregate...) or they can remain visible. Their finish coat then participates in the ballast, traffic and aesthetic functions.

Generally speaking, the Liquid Waterproofing Systems are not designed to be applied directly on thermal insulation. Other than that, the Parathane Liquid Waterproofing Systems are very suitable for waterproofing rough surfaces (curved, numerous penetrations...)

The main applications of the Parathane Liquid Waterproofing Systems are in the following fields:

- ▶ Decks and roofs that are unsuitable for traffic (or unsuitable parts such as gutters, drain channels, plant boxes, cupolas...);
- ▶ Flat roofs or zones suitable for pedestrian traffic;
- ▶ Balconies, balcony walkways, loggias, tiers of stadium seats;
- ▶ Access ramps (with anti-skid finish);
- ▶ Intermediate floorings of rooms with water outlets, kitchens, WCs, plant rooms;
- ▶ Retention basins, tanks.

Reference documents.

Local Building Technical Standards for:

- ▶ design of the masonry carcass of roofs intended to receive waterproofing covering;
- ▶ waterproofing of roofs-decks and sloping roofs with masonry bearing elements in plains climate;
- ▶ for coverings for bedded floors;
- ▶ floor paintwork;
- ▶ Liquid Waterproofing Systems, waterproofing works entailing application of Liquid Waterproofing Systems on exterior masonry floors overhanging parts of a building that are not closed in.

Profession Rules for waterproofing works carried out by application of Liquid Waterproofing Systems on intermediate inside floors.

Classification of tiling adhesives: Definitions and Specifications.

Technical Standards for inside & outside floor coverings of ceramic or analogous tiling, bonded using cementitious glues or adhesives.

Technical Standards for inside wall coverings of ceramic or analogous tiling, bonded using cementitious glues or adhesives.

Parathane

Parathane Liquid waterproofing systems

Classification of the Liquid Waterproofing Systems

According to their allowable application and according to their composition, the French Professional Association for Liquid Waterproofing Systems Professional Rules breaks the Liquid Waterproofing Systems (LWS) down into the following 5 classes:

LWS class	Parathane system	Works	Climate - Weather	Scope of application	Protection	Dry thickness
SE1	8	Remedial works on structures more than 10 years old	Applicable in plains climate	Floors for private pedestrian traffic: balconies, loggias with unit surface areas $\leq 20m^2$, including protruding structures connected to these floors.	Visible. Not usable under hard ballast	$\geq 0.5mm$ reinforced; $> 0.8mm$
SE2	4	New works or works on old structures	Applicable in plains climate	Floors for private pedestrian traffic: balconies, loggias, balcony walkways, overhead walkways, grandstands, stairways including protruding structures connected to these floors. Belts, cornices, canopies, parapet copings.	Visible. Not usable under hard ballast	$\geq 0,8mm$
SE3	2 or 3	New works or works on old structures	Applicable in plains climate	Floors for pedestrian traffic under hard protection, including protruding structures connected to these floors.	Usable only under hard protection	$\geq 1,0mm$
SE4	4, 5 or 6	New works or works on old structures	Applicable in plains climate and in mountain climate	Floors for pedestrian traffic, balconies, loggias, balcony walkways, overhead walkways, grandstands, stairways including protruding structures connected to these floors, belts, cornices, canopies, parapet copings.	Usable for direct access or under isolated hard protection	$\geq 1,0mm$
SE5	check with us	New works or works on old structures	Applicable in plains climate and in mountain climate	Floors for pedestrian traffic under hard protection, including protruding structures connected to these floors.	Usable exclusively under bonded hard protection	$\geq 1,0mm$

Allowable substrates – preparation

The Parathane Liquid Waterproofing Systems can be applied on the following substrates:

- ▶ Masonry (joint bridging with Parathane Mat) according to Local Building Technical Rules;
- ▶ Monolithic elements of reinforced concrete and derivatives (slabs, precast carcass walls and hydraulic binder base dressings);
- ▶ Wood and wood fibre substrates suitable for outside application and in compliance with local technical rules;
- ▶ Ferrous and non-ferrous metal elements (ISO 8501, ISO 12941);
- ▶ Water-repellent plaster slabs and plaster (for interior partitions only);
- ▶ Glass and glass blocks;

- ▶ Tiling, tough ceramic tile, marble, re-constituted stone.

Since the Liquid Waterproofing Systems are full-surface laid, considerable care must be taken in the inspection and preparation of the substrates. Generally, this preparation comprises:

- ▶ Elimination of all non-adherent and/or powdery parts (generally by mechanical abrasive polishing followed by careful vacuuming, and, if necessary, by grit blasting, chemical stripping, high pressure cleaning...);
- ▶ Making sure the substrate is dry when the Liquid Waterproofing System is applied;
- ▶ Making sure of the proper flatness of the substrate, as well as of any slopes and reserved recesses for water drainage;

- ▶ Bridging any cracks with the aid of a reinforcing element.

Important: another factor in the success of a liquid waterproofing system is adequate use of the primer. For the Parathane system, the adjacent table is a guide for optimal choice of the primer.

Climatic conditions

The Parathane Liquid Waterproofing Systems are suitable for weather or climatic conditions in plains and in mountains (altitude $\geq 900\text{m}$).

For applying the Parathane Liquid Waterproofing Systems in mountain climate, particular precautions need to be taken in compliance with the Professional Rules for Liquid Waterproofing Systems.

In mountain climate, pay attention to the specific restrictions related to:

- ▶ Daily differences in surface temperature;
- ▶ Concentrated or spread loads of snow and ice;
- ▶ Siphon phenomena in case of ice barrier;
- ▶ Limited periods during which it is possible to build or to service.

Slope

The Parathane Liquid Waterproofing Systems impose no particular specifications with relation to slope (application possible from zero slope to vertical). So the slope limits are those of the

regulations in force for the underlying structures concerned.

Attention: laying at zero slope may lead to water puddling which might be harmful for the application and/or might quickly alter the aesthetics (fouling).

Architectural possibilities

In addition to the particular beauty which bedded or bonded tiling might add on the Parathane covering, this covering can contribute by itself to the aesthetics of the building when left visible.

The Parathane Liquid Waterproofing Systems come in 6 perfectly juxtaposable colours likely to be combined with several types of finish:

- ▶ smooth and/or glossy appearance;
- ▶ more or less skid resistance;
- ▶ for interiors or exteriors (stability under UV).

European Technical Approval/EC

The Parathane Liquid Waterproofing System is covered by the European Technical Approval under no. 05/0127, conferring upon it the EC label for the Parathane products and systems.

Design and Installation Manual

The «Parathane» Design and Installation Manual of the Siplast-Icopal Company provides all the instructions to be respected concerning the application of the Parathane Liquid Waterproofing Systems.

	Product name	Description	Solvent-based	Substrate type	Damp substrate	Application
Primers	Parathane Primer	Polyurethane single component	Yes	Hydraulic, metal	No	Outside, inside (1) (2)
	Parathane Epoxy Primer	Two-component epoxy in aqueous dispersion	No	Stone, granite, hydraulic binder	Yes (3)	Inside and outside
	Parathane Silane Primer	Silane in aqueous solution	No	glass, ceramic coverings, smooth concrete	–	Inside and outside for warm climates
Accessories	Parathane Mat 15cm	Nylon fabric	Not applicable	Cracks	Not applicable	Inside and outside
	Parathane Mastic	Single component / polyurethane	Yes	Cracks and details	No	mastic and dealing with details

(1) In ventilated interior – (2) For warm climates ($T > 40^\circ\text{C}$), use Parathane Epoxy Primer – (3) Damp non-seeping substrates (check with us)

Waterproofing of non-accessible roof (except for maintenance or servicing)

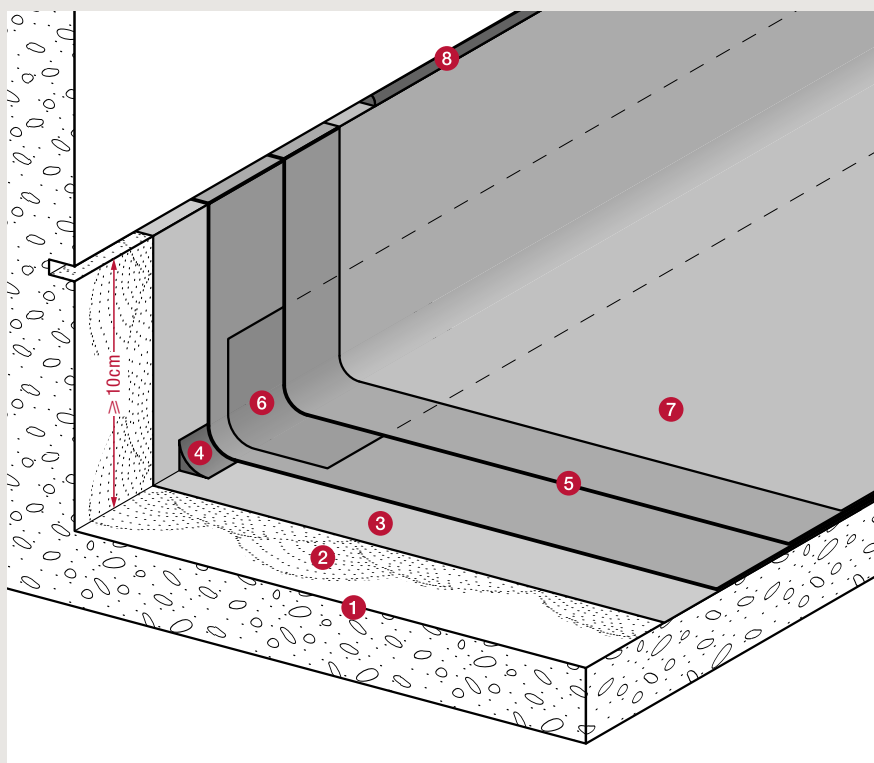
Masonry substrate

Liquid waterproofing system, polyurethane elastomer base

All slopes

CE

Parathane system 1



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to the substrate's porosity)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.5 kg/m², thickness > 1.2mm (applied in 2 coats minimum)
- 6 Parathane Mat reinforcement
- 7 Glossy finish (optional): Parathane Finish UV-Clear (colour according to colour chart) applied in 1 coat, approximately 150g/m²
- 8 Parathane Mastic bead seal

Application examples

- Waterproofing of non-accessible roof, penthouses, domes, canopies and small masonry structures, cap cornices, belts, consolidated gutters, etc..

- Height H: refer to local building technical rules (H > 15cm in zero slope).
- Zero slope: stagnating water may have harmful effects on the aesthetics (fouling) or can be an annoyance for the user.
- Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See Parathane Installation Manual.
- Appearance: any roughness of the substrate remains visible on the surface of a liquid waterproofing system. Prior dressing with Parathane Flash may be necessary.

- Primer: the primer must be suitable to the nature, quality and dryness of the substrate.
- Trick of the trade: choosing different colours for each coat facilitates self-inspection of the overlaying coats by the applicator: this arrangement also makes it possible to create a liquid waterproofing system wear control example.
- Upstand angle: on monolithic horizontal and vertical substrates (example: reinforced concrete), Parathane Mat is optional.

For further information

- Parathane Installation Manual

- Protection at the top of the upstand: the fastening slot can be replaced by catches, sections, etc. according to the technical standards in force or with the instructions in the professional rules for liquid waterproofing. Refer to the Parathane Installation Manual.
- Mountain climate. Refer to the Parathane Installation Manual.

Waterproofing of pedestrian terrace with additional heavy protection

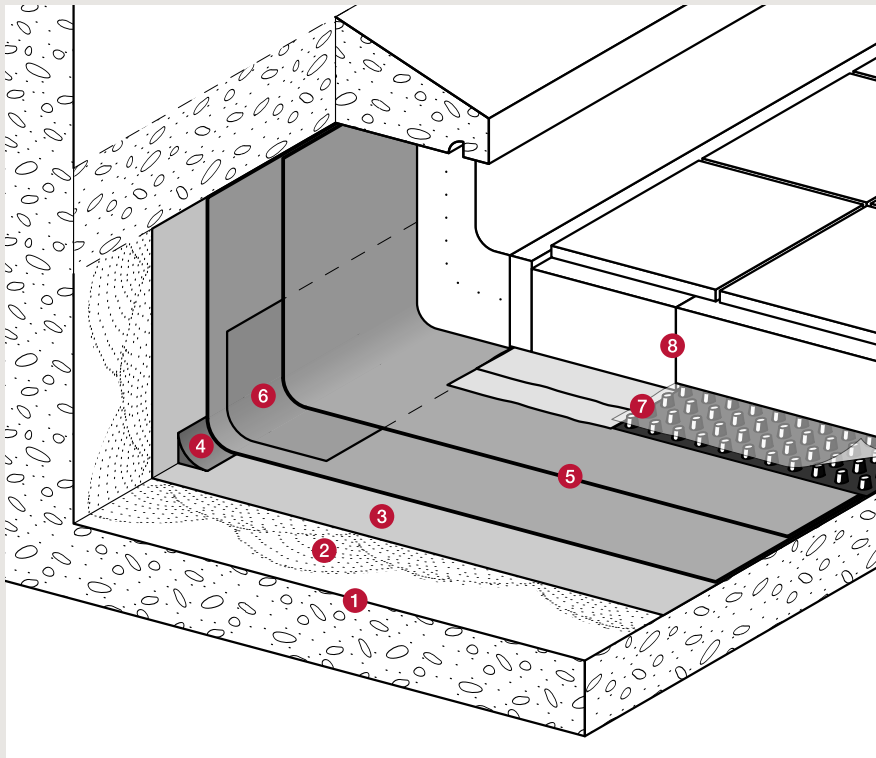
Masonry substrate

Liquid waterproofing system, polyurethane elastomer base

Parathane system 2

All slopes

Hard ballast



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to porosity and quality of the substrate)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.5kg/m², thickness > 1.2mm (applied in 2 coats minimum)
- 6 Parathane Mat reinforcement
- 7 Separating membrane Draina G10 or Gravifiltre + plastic film thickness ≥ 100µm for surfaces ≤ 30m²
- 8 Additional heavy protection (see technical rules in force)

Application examples

- Waterproofing of service roofs or roofs suitable for pedestrians with bedded tiling, slabs on pedestals (with or without inverted insulation).
- Waterproofing of roofs suitable for vehicle traffic with reinforced concrete slabbing.
- Waterproofing of roofs unsuitable for traffic with fine gravel (with or without inverted insulation).
- Waterproofing of intermediate floors with bedded covering. Rooms with running water, kitchens or communal restrooms.

For further information

- Parathane Installation Manual

- Slope: the slope depends on the nature of the protection and on the intended use. Refer to the technical rules in force.
- Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See Parathane Installation Manual.
- Primer: the primer shall be suitable to the nature, quality and dryness of the substrate.

- Trick of the trade: choosing different colours for each coat facilitates self-inspection of the overlaying coats by the applicator.
- Upstand angle: on monolithic horizontal and vertical substrates (example: reinforced concrete), Parathane Mat is optional.
- The hard ballast, the protection at the top and the upstand height comply with the technical standards in force or with the instructions in the professional rules

for liquid waterproofing (outside or inside floors). The choice of the covering depends on the expected use.

- The fire reaction rating is the one of the heavy ballast.
- Mountain climate: see the Parathane Installation Manual (ballast by fine gravel or by slabs on pedestals only).

Waterproofing under bonded tiling for pedestrian access

Masonry substrate

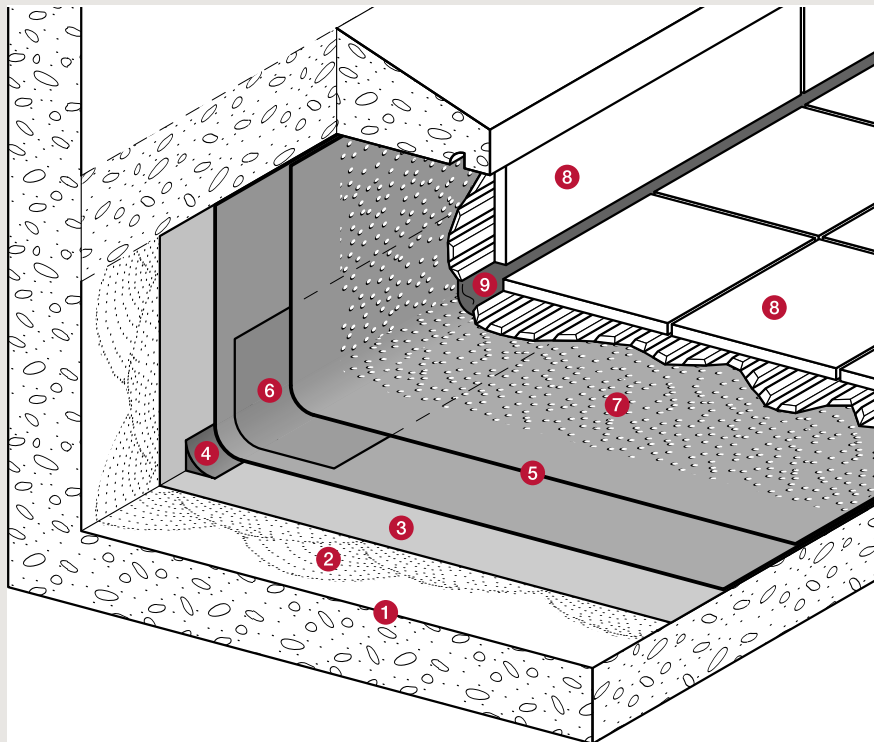
Liquid waterproofing system, polyurethane elastomer base

Slope:
1.5 to
5%

Hard
ballast



Parathane system 3



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to porosity of the substrate.)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.8kg/m², thickness > 1.5mm (applied in 3 coats minimum: 2 coats of 750g/m² each and 300g/m² as anchorage coat)
- 6 Parathane Mat reinforcement
- 7 Mechanical tack coat: 2 to 3kg/m² of calibrated silica. Silica Parathane Medium powdered on to repletion on fresh resin
- 8 Bonded coverings
- 9 Flexible seal with Parathane Mastic

Application examples

- Waterproofing of roofs-decks, balconies, balcony walkways, stairways, private or public use, with bonded covering.
- Waterproofing of intermediate floors and vertical walls with toilets, kitchens, restrooms, rooms with running water, showers, bathrooms with bonded covering for private or public use, poolside decks.

- Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See Parathane Installation Manual.
- Primer: the primer shall be suitable to the nature and the dryness of the substrate.
- Trick of the trade: choosing different colours for each coat facilitates self-inspection of the overlaying of the coats by the applier.

- Upstand angle: on monolithic horizontal and vertical substrates (example: reinforced concrete), Parathane Mat is optional.
- Bonded covering: ceramic or hard stone tiles, bonded with cementitious adhesive or other allowable coverings in the Parathane Installation Manual. Choice of covering depending on the expected use.
- The protection at the top and the upstand height comply with the technical standards in force or with the instructions

For further information

- Parathane Installation Manual

in the professional rules for liquid waterproofing (particularly height of treatment on walls of rooms with running water).

- Mountain climate: use of system not specified on outside floors.
- Floor with in-floor heating: systems of in-floor heating are allowable (systems with limited temperature variation) at liquid waterproofing system level < 28°C. The installation instructions are enclosed in the Parathane Installation Manual.

Waterproofing of pedestrian access surfaces, (private or technical service use)

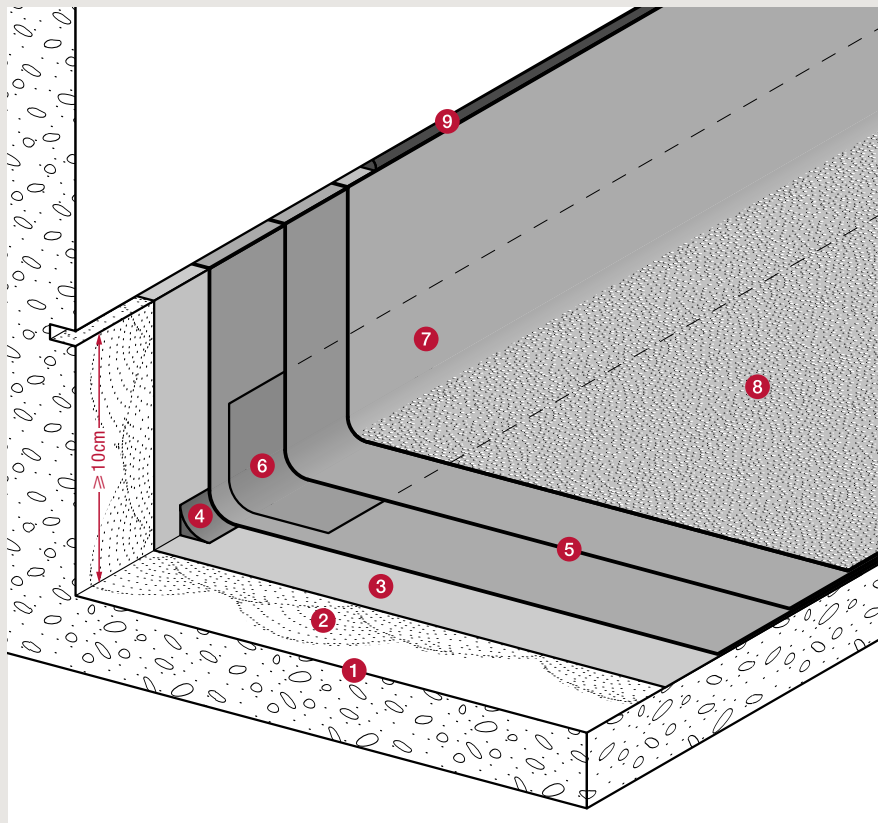
Masonry substrate

Liquid waterproofing system, polyurethane elastomer base

Parathane system 4

Slope
≤ 5%

CE



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to the substrate's porosity)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.5kg/m², thickness > 1.2mm (applied in 2 coats minimum)
- 6 Parathane Mat reinforcement
- 7 Coloured finished: 1 coat minimum of Parathane Finish Clear (interior) or UV Clear coloured, exterior (according to colour chart) at 150g/m² minimum
- 8 Non-skid (recommended): application of the finish coat with blend of calibrated corundum. Parathane Fine Corundum, 20% in weight.
- 9 Flexible seal with Parathane Mastic

Application examples

- Waterproofing of roofs-decks, balconies, balcony walkways, stairways.
- Waterproofing of service roofs
- Waterproofing of intermediate floors and vertical walls with toilets, kitchens, restrooms, rooms with running water, showers, etc.
- Plant rooms, utility rooms.

For further information

- Parathane Installation Manual

■ Zero slope: the height H of the upstand is brought to 15cm minimum. Water stagnation can have adverse effects on the aesthetics (fouling) or can be an annoyance for the user.

■ Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See P.I.M.

■ Appearance: any roughness remains visible on the surface of liquid waterproofing systems. A prior dressing with Parathane Flash may be necessary.

■ Primer: the primer shall be suitable to the nature, quality and dryness of the substrate.

■ Trick of the trade: choosing different colours for each coat facilitates self-inspection of the overlaying of the coats by the applicator. This arrangement also makes it possible to create a wear control example.

■ Upstand angle: on monolithic horizontal and vertical substrates (example: reinforced concrete), Parathane Mat is optional

■ Protection at the top of the upstand: the fastening slot can be replaced by

ridges, sections, etc. See the technical standards in force or with the instructions in the professional rules for liquid waterproofing (in particular, height of treatment of walls of rooms with running water). Refer to the Parathane Installation Manual.

■ Mountain climate: refer to the Parathane Installation Manual.

■ Floor with in-floor heating: systems of in-floor heating are allowable (systems with limited temperature variation) at LWS level < 28°C. The installation instructions are enclosed in the Parathane Installation Manual

Waterproofing of pedestrian access surfaces (public or communal use)

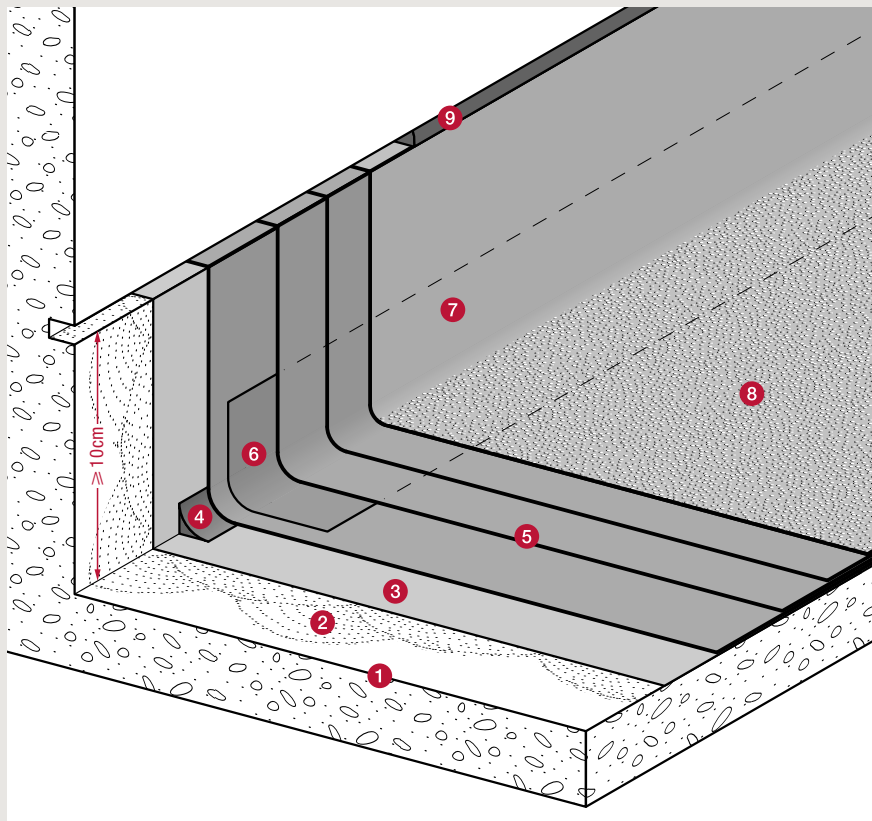
Masonry substrate

Liquid waterproofing system, polyurethane elastomer base

Parathane system 5

Slopes
≤ 5%

CE



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to the substrate's porosity)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.8kg/m² minimum, thickness > 1.5mm (applied in 3 coats minimum)
- 6 Parathane Mat reinforcement
- 7 Coloured finish: minimum: 1 coat of Parathane Finish UV Clear coloured (according to colour chart) at 150g/m² minimum
- 8 Non-skid (recommended): application of 1 finish coat with blend of calibrated corundum. Parathane Fine Corundum, 20% in weight.
- 9 Parathane Mastic bead seal

Application examples

- Waterproofing of roofs-decks, balconies, balcony walkways, stairways.
- Waterproofing of service roofs
- Waterproofing of intermediate floors and vertical walls with toilets, kitchens, restrooms, rooms with running water, showers, etc.

- Zero slope: the height H of the upstand is brought to 15cm minimum. Water stagnation can have adverse effects on the aesthetics (fouling) or can be an annoyance for the user.
- Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See Parathane Installation Manual.
- Appearance: any roughness remains visible on the surface of liquid waterproofing systems. A prior dressing with Parathane Flash may be necessary.

- Bonding primer: the bonding primer must be suitable to the nature and dryness of the substrate.
- Trick of the trade: choosing different colours for each coat facilitates self-inspection of the overlaying of the coats by the applicator. This arrangement also makes it possible to create a wear control example.
- Upstand angle: on monolithic horizontal and vertical substrates (example: reinforced concrete), Parathane Mat is optional.

For further information

- Parathane Installation Manual

- Protection at the top of the upstand: the fastening slot can be replaced by ridges, sections, etc. See the technical standards in force or with the instructions in the professional rules for liquid waterproofing (in particular, height of treatment of walls of rooms with running water). Refer to the Parathane Installation Manual.
- Mountain climate: refer to the Parathane Installation Manual.

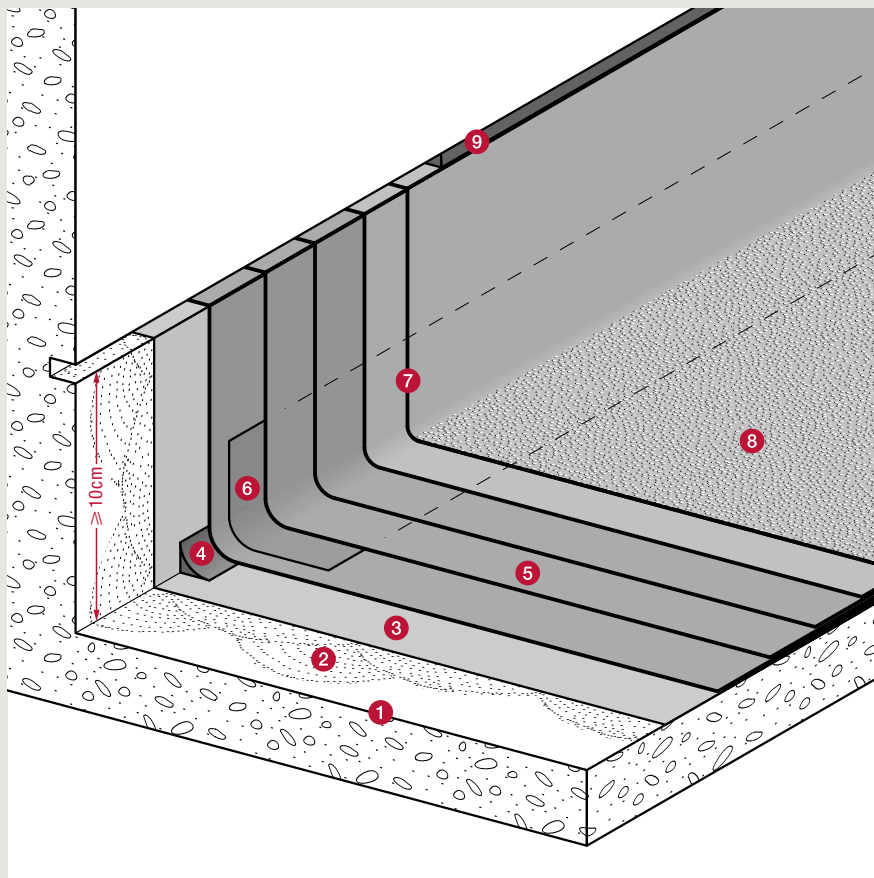
Waterproofing of surfaces for vehicle access ramp or pedestrian access, intense traffic

Masonry substrate

Liquid waterproofing system, polyurethane elastomer base

Parathane system 6

Slopes
≤ 5%



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to porosity and quality of the substrate)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.8kg/m² minimum, thickness > 1.5mm (applied in 3 coats minimum)
- 6 Parathane Mat reinforcement
- 7 Coloured Clear UV Parathane finish (see colour chart) at 300g/m² minimum applied in 2 coats minimum.
- 8 Non-skid (recommended): application of the finish coat with blend of calibrated corundum. - Fine corundum Parathane 20% in weight. Ramps: Corundum granule Parathane finish: (4kg/m²)
- 9 Parathane Mastic seal

Application examples

- Vehicle access ramp.
- Stadiums, grandstands, foot paths, overhead walkways.
- Floors or decks with intense traffic.

■ The slope limits are in compliance with the technical standards in force. A slope < 2% can cause water stagnation which can have adverse effects on the aesthetics (fouling) or can be an annoyance for the user.

■ Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See Parathane Installation Manual.

■ Appearance: any roughness remains visible on the surface of a liquid waterproofing system. A prior dressing with Parathane Flash may be necessary.

■ Primer: the primer shall be suitable to the nature, quality and dryness of the substrate.

■ Trick of the trade: choosing different colours for each coat facilitates self-inspection of the overlaying of the coats by the applicator. This arrangement also makes it possible to create a wear control example.

For further information

- Parathane Installation Manual

■ Upstand angle: on monolithic horizontal and vertical substrate (example: reinforced concrete), Parathane Mat is optional.

■ Protection at the top of the upstand: the fastening slot can be replaced by ridges, sections, etc. See the technical standards in force or with the instructions in the professional rules for liquid waterproofing.

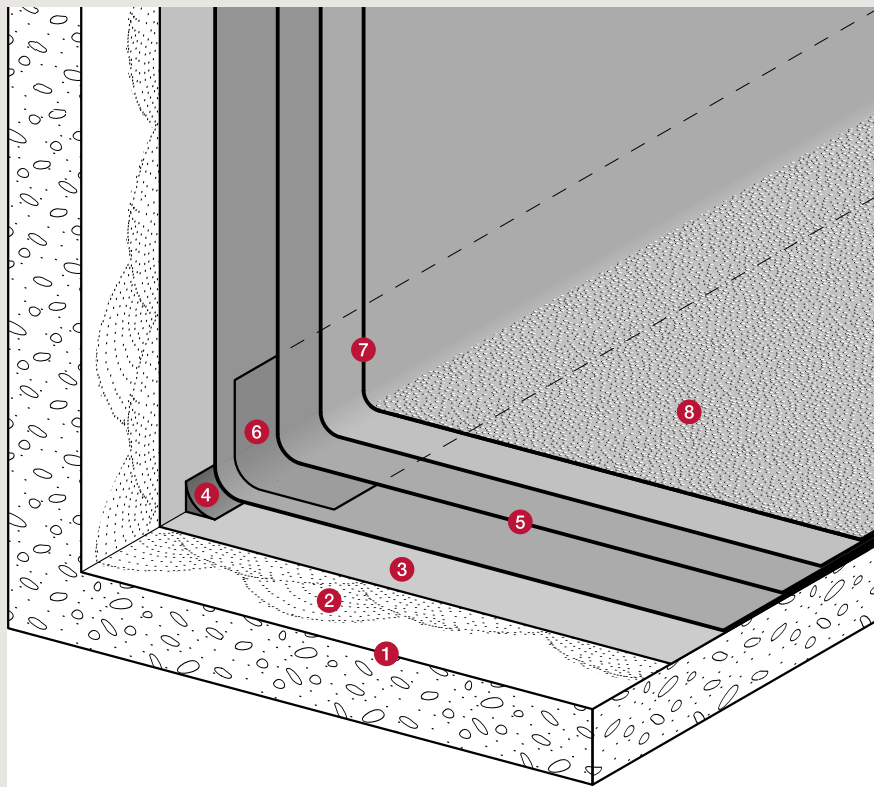
■ Mountain climate: refer to the Parathane Installation Manual.

Waterproofing of reservoirs, tanks, retention basins, silos

Masonry substrate

Liquid waterproofing system, polyurethane elastomer base

Parathane system 7



- 1 Masonry substrate (reinforced concrete, slabs, bonding screeds, etc.)
- 2 Substrate preparation (cleaning, abrasive polishing, sanding, grit blasting, etc.)
- 3 Primer: Parathane Primer applied in 1 coat (100 to 350g/m² according to the substrate's porosity)
- 4 Parathane Mastic chamfer
- 5 Parathane waterproofing coating, at 1.5kg/m², thickness >1.2mm (applied in 2 coats minimum)
- 6 Parathane Mat reinforcement
- 7 Coloured Parathane Finish Clear or UV Clear (see colour chart) at 300g/m² minimum, applied in 2 coats minimum.
- 8 Non-skid option (recommended): application of the finish coat with mixture of calibrated corundum, Parathane Corundum Fine 20% in weight

Application examples

- Drain channels.
- Hydrocarbon retention tank.
- Retention basins for wastewater or drinking water, refuse storage, reservoir for water for fire fighting, etc.

- According to the nature of any chemicals in contact, check with us
- Zero slope: stagnating water can annoy the user (clean the tank).
- Other substrates: substrates of tiling, stone, old waterproofing, glass blocks, etc. are also allowable. See Parathane Installation Manual.

- Appearance: any roughness remains visible on the surface of an liquid waterproofing system. A prior dressing may be necessary.
- Primer: the primer shall be suitable to the nature and dryness of the substrate.
- Trick of the trade: choosing different colours for each coat facilitates self-

For further information

- Parathane Installation Manual

inspection of the overlaying of the coats by the applier. This arrangement also makes it possible to create a wear control example.

- Upstand angle: on monolithic horizontal and vertical substrates (example: reinforced concrete), Parathane Mat is optional.

Installation

General presentation

Substrate preparation is the first phase of installation. It is also a very important phase and the utmost care is to be given to surveying and checking the condition of the substrate.

The points to be checked are as follows:

- ▶ Flatness (no deflection greater than 5mm under a rule of 2m and no deflection greater than 2mm under a rule of 20cm);
- ▶ Surface state complying with the technical standards in force or with the instructions in the professional rules for liquid waterproofing.

The phases

■ Substrate preparation

Before laying the Parathane liquid waterproofing system, the substrate is to be cleaned by appropriate means.

The slope and the flatness as defined above can be obtained either by reshaping, abrasive polishing or planing.

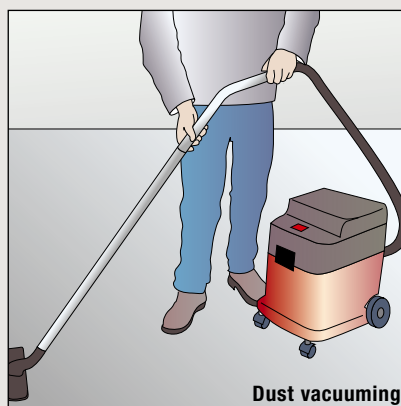
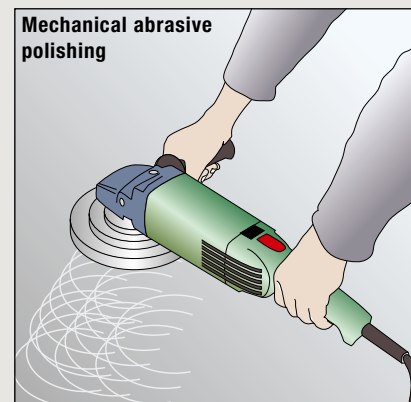
- ▶ The surface cohesion $\geq 1\text{MPa}$ for the concrete and $\geq 0.5\text{MPa}$ for the cementitious adhesive;
- ▶ Cleanliness: the surface shall be free of grout, dust, powdery zones and various stains (oil, grease, etc.);
- ▶ Dryness, in particular on the dressed substrates with a residual water content $\leq 4\%$ of the dry weight (check with us for contents $> 4\%$);
- ▶ The temperature of the substrate at the moment of application which is to be more than 3°C above the dew point temperature (risk of condensation);

- ▶ Porosity (water drop test absorption). Otherwise, check with Siplast-Icopal for the use of a special primer.

The other criteria for success include:

- ▶ Checking the temperature and relative humidity (% RH) of the substrate and of the ambient air;
- ▶ In every case, the air humidity shall be $\leq 90\%$ RH (1);
- ▶ The substrate temperature is to be lower than 45°C (1);
- ▶ Respecting the drying times of the primer and resins;
- ▶ The maximal time interval between the overlaying coats.

(1) If necessary, check with us.

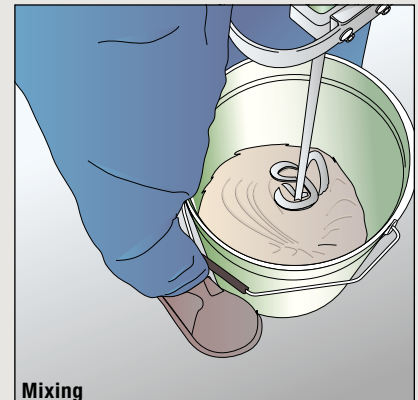


Parathane

Parathane Liquid waterproofing systems

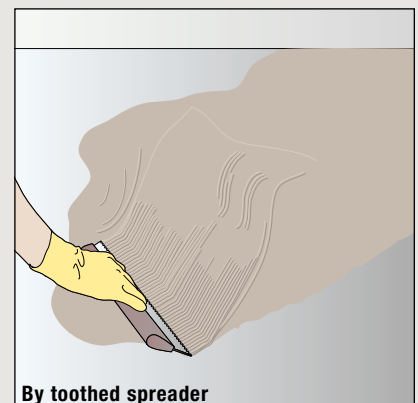
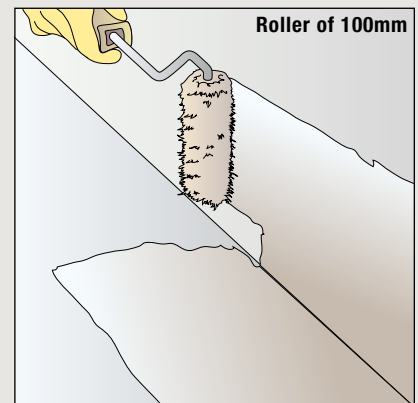
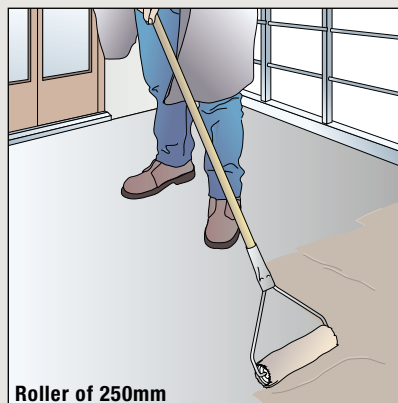
■ Preparation of the mixes

Set aside a zone for the mixes (mixing station) with protection of the floor, storage of materials and empty packing.



■ Application of the Parathane liquid waterproofing systems

The primers, waterproofing resins and any finishes, are to be laid according to the desired thickness per coat, with the aid of the following tools: rollers, rubber spreaders, toothed spreaders, brushes or by airless spray.

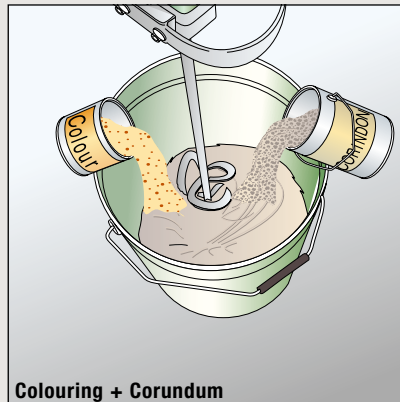


■ Finish work

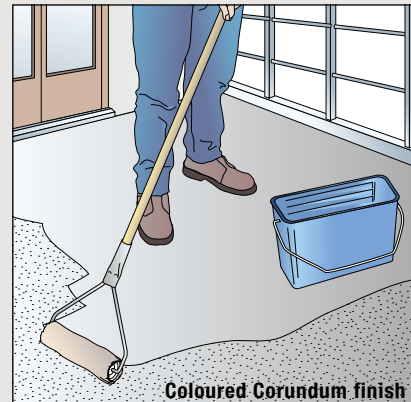
Transparent finish resins, by colouring with the aid of pigment pastes, make it possible to apply wear coats in a large choice of colours.

Incorporating corundum powder in the coloured finish also provides slippage resistance.

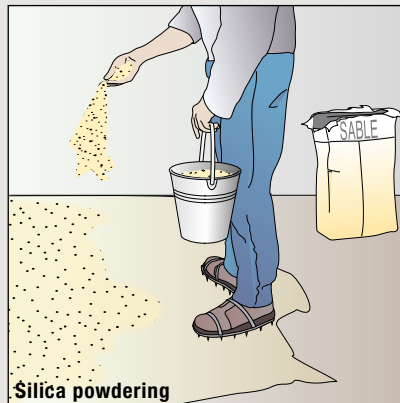
In case of bonded tiling ballast, calibrated silica is spread on the still fresh resin and, after drying (72h at 20°C), the excess is swept off in preparation for the application of a bonded covering (tiling...).



Colouring + Corundum



Coloured Corundum finish

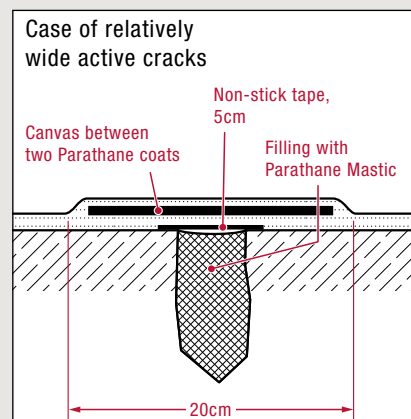
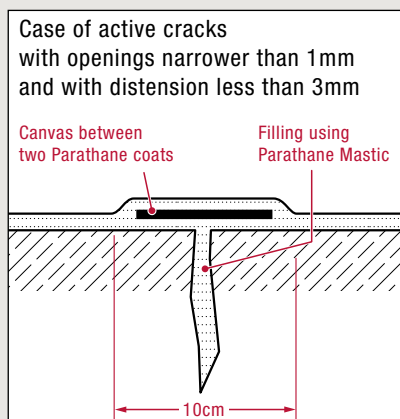
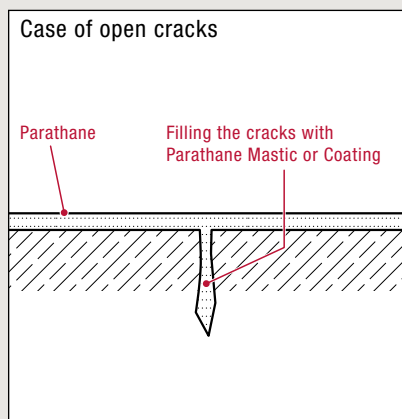


Silica powdering

Details and connections

Cracks

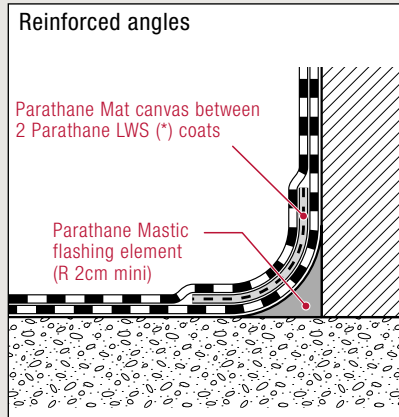
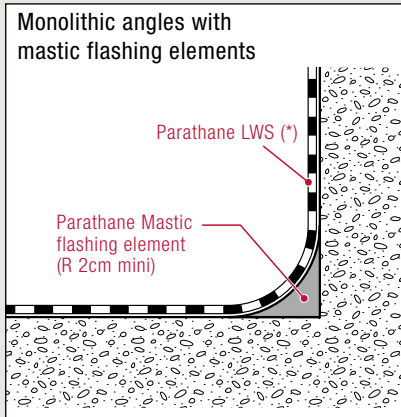
As a preparation, non-fillform cracks shall be plugged with Parathane Mastic after widening to eliminate any loose fragments.



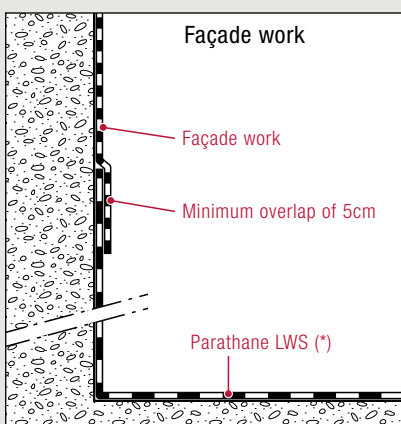
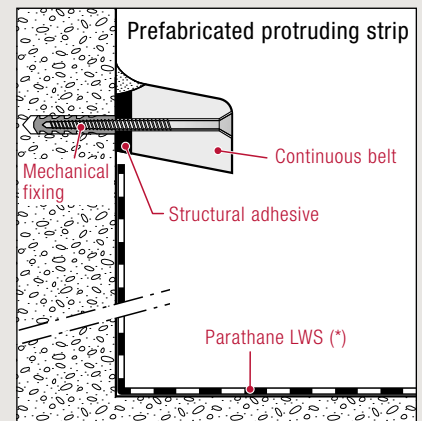
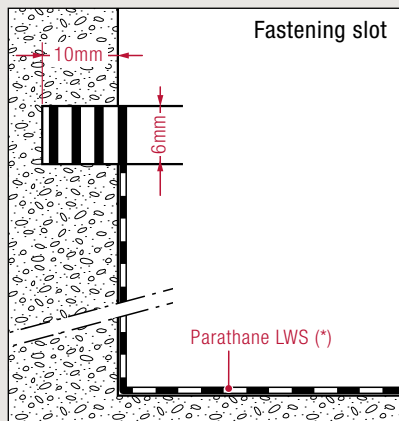
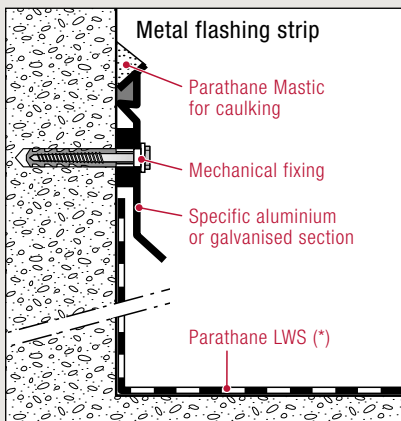
Parathane

Parathane Liquid waterproofing systems

Angles

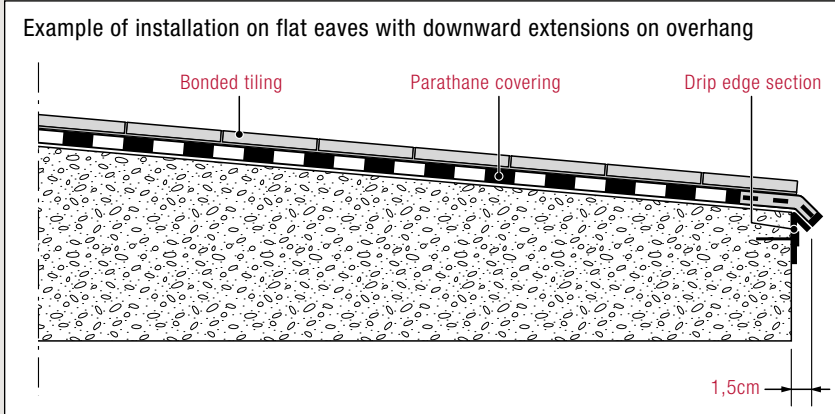


Upstands

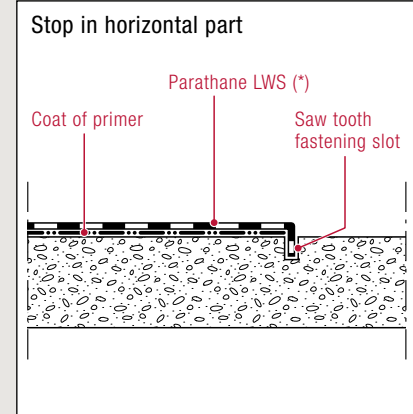


*LWS = Liquid Waterproofing System

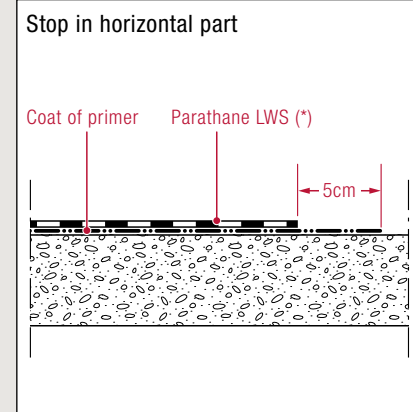
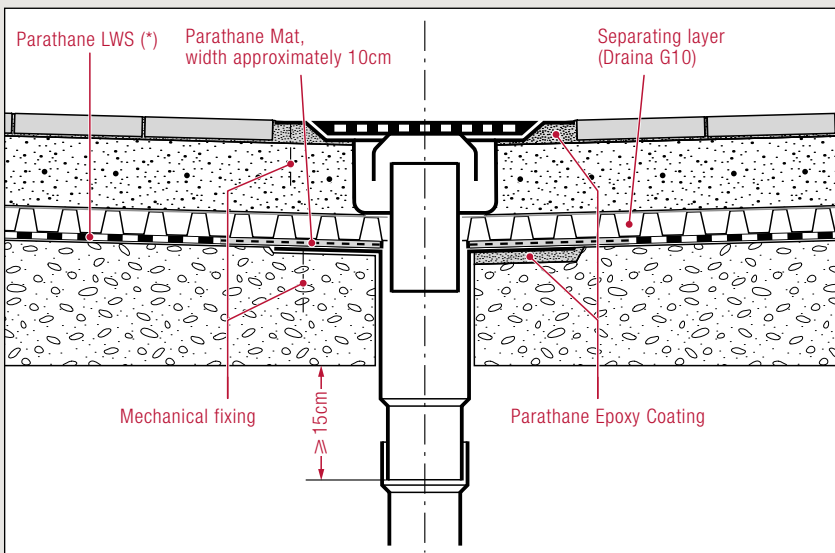
Protections for eaves



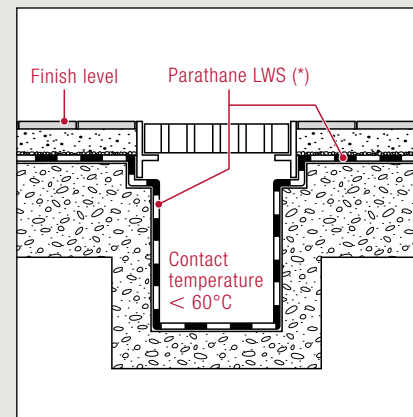
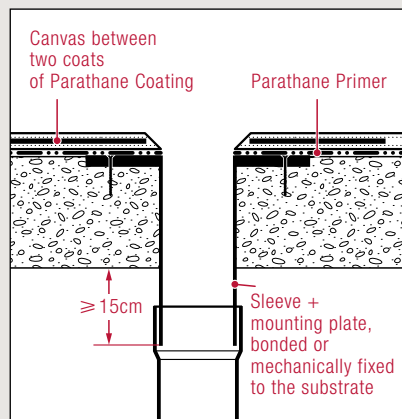
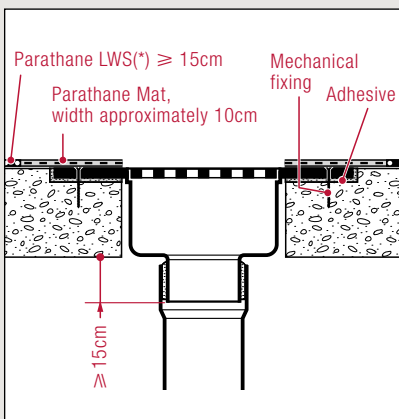
Thresholds and stops



Rainwater drainage



Dealing with drain channels / consolidated gutters

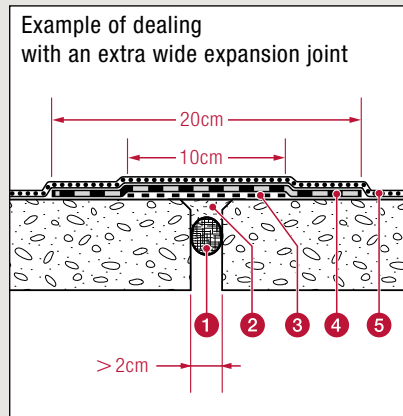


*LWS = Liquid Waterproofing System

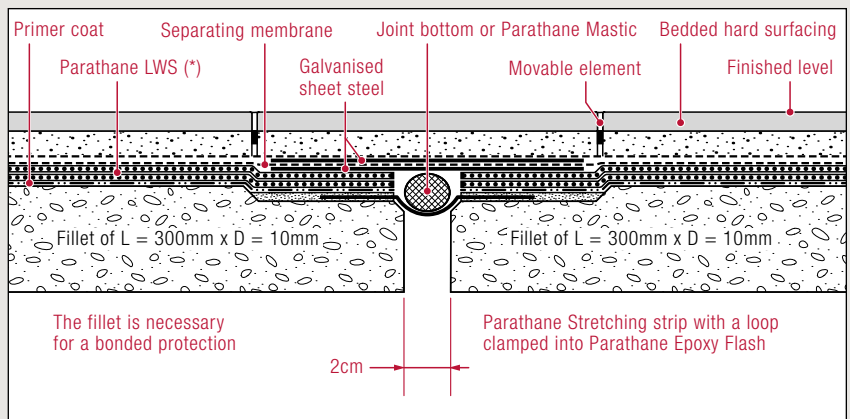
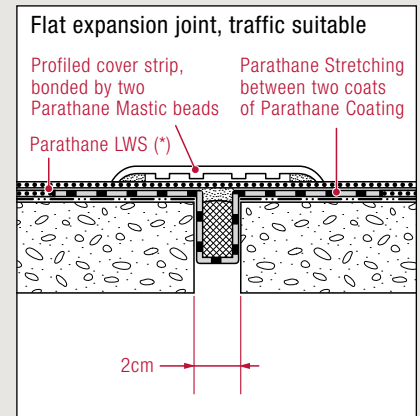
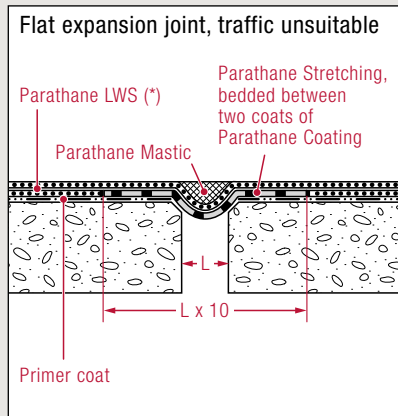
Parathane

Parathane Liquid waterproofing systems

Expansion joints



- 1 Joint bottom of expanded foam
- 2 Filling with 1st category elastomer mastic
- 3 Isolating strip
- 4 LWS (*) with reinforcement or elastomer strip
- 5 Parathane LWS (*)



*LWS = Liquid Waterproofing System

Parathane Product Range

Code	Product Name	Unit	Use
Parathane Accelerator			
100826	Parathane Accelerator 0,250kg	0.250kg can	To be added to Parathane Coating 6kg
100897	Parathane Accelerator 1kg	1 kg can	To be added to Parathane Coating 20kg
Parathane Coating			
100951	Parathane Coating beige 20kg	15l / 20kg can	Coloured (beige) waterproof coating
100860	Parathane Coating beige 6kg	6kg can	Coloured (beige) waterproof coating
100894	Parathane Coating white 20kg	15l / 20kg can	Coloured (white) waterproof coating
100861	Parathane Coating white 6kg	6kg can	Coloured (white) waterproof coating
100893	Parathane Coating grey 20kg	15l / 20kg can	Coloured (grey) waterproof coating
100823	Parathane Coating grey 6kg	6kg can	Coloured (grey) waterproof coating
100895	Parathane Gel Coating gris 5kg	5kg can	Gel for vertical parts (upstands, difficult details)
Parathane Colour			
100862	Parathane Colour beige 0,5kg	0.5kg can	Coloured paste (beige) to be added to Parathane Finish UV Clear
100829	Parathane Colour grey 0,5kg	0.5kg can	Coloured paste (grey) to be added to Parathane Finish UV Clear
100863	Parathane Colour ivory 0,5kg	0.5kg can	Coloured paste (ivory) to be added to Parathane Finish UV Clear
100864	Parathane Colour red 0,5kg	0.5kg can	Coloured paste (red) to be added to Parathane Finish UV Clear
100865	Parathane Colour green 0,5kg	0.5kg can	Coloured paste (green) to be added to Parathane Finish UV Clear
Parathane Anti-skid Walkway Finish			
100834	Parathane Corindon Fine 1kg	1kg can	Corindon fine granules to mix with Parathane UV Finish
100835	Parathane Corindon Fine 50kg	50kg can	Corindon fine granules for ramps
Parathane Epoxy			
100831	Parathane Epoxy Flash 1kg	1kg kit	Epoxy range: coating for levelling and sealing
100820	Parathane Epoxy Primer 4kg	4kg Kit	Epoxy water-based Primer
100967	Parathane Epoxy Primer A 20kg	15kg can	Two-component Epoxy Primer : component A
100968	Parathane Epoxy Primer B 20kg	5kg can	Two-component Epoxy Primer: component B
Parathane Finish / floor surfaces			
100827	Parathane Finish Clear 5kg	5kg can	Transparent finish coat
100828	Parathane Finish UV Clear 4kg	4kg can	UV resistant finish coat
100830	Parathane Flash grey 5kg	5kg kit	Coat for levelling the substrate:component
100969	Parathane Flash grey A 20kg	15.5kg can	Two-component coat for levelling the substrate:component A
100970	Parathane Flash grey B 20kg	4.5kg can	Two-component coat for levelling the substrate:component B
Parathane ancillary products and application tools			
100832	Parathane Mastic grey 300ml	cartridge	Parathane sealant applied to all cracks and 90° angle joints
101272	Parathane Mastic grey 600cc	cartridge	Parathane sealant applied to all cracks and 90° angle joints
100833	Parathane Mat 15cm x 50m	roll	Nylon reinforcing mat for 90° angle joints, laps, cracks and gaps
101392	Parathane Stretching 15cm x 25m	roll	Flexible composite strip for joints and cracks
101003	Parathane Solvent 5l	can	Solvent for cleaning and diluting
101028	Parathane Tool Kit NR 1	kit	Bucket with basic tools for application with roller
101036	Parathane Tool Kit NR 2	cardboard	Set of tools for application with toothed spreader
101273	Parathane Gun for 600cc cartridge	unit	Gun for mastic cartridge
Parathane Primers			
100816	Parathane Primer 20kg	20kg can	Solvent-based Primer
100817	Parathane Primer 5kg	5kg can	Solvent-based Primer
100818	Parathane Primer 1kg	1kg can	Solvent-based Primer
100821	Parathane Silane Primer 4kg	4kg can	Primer for smooth surface (ceramic tiling, glass, etc).
Parathane Silica			
100836	Parathane Silica Fine 25kg	25kg bag	Fine silica
100837	Parathane Silica Medium 25kg	25kg bag	Silica finish for tiling

