



Liquid Waterproofing for Sub-structures

Cold applied, liquid waterproofing membrane for below ground structures.

System Description

Procor™ is a two component, synthetic rubber, liquid waterproofing membrane. It cures to form a resilient, fully bonded elastomeric sheet. Procor™ will protect below ground structures against water and water vapour ingress. At a single coat thickness of 1.5mm, Procor™ will resist a hydrostatic head in excess of 20m when fully loaded.

Procor™ system is particularly suited to waterproofing below ground structures where:

- The use of sheet tanking membranes is difficult due to detailing or because the substrate is uneven.
- Waterproofing internal floors where the use of non hazardous products are preferred.

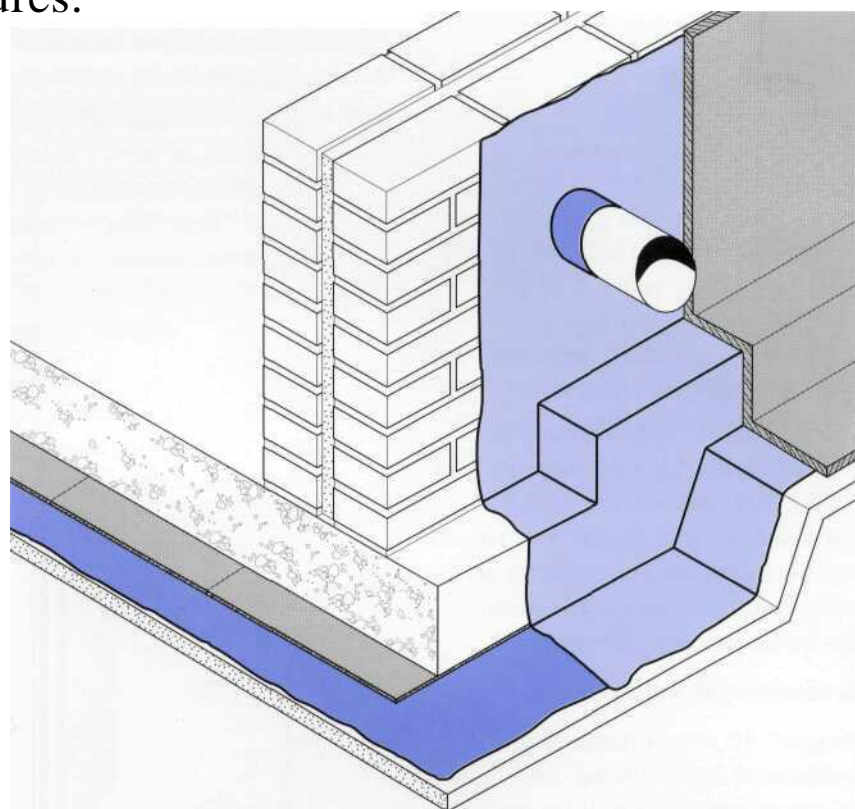
The Procor™ system comprises:

- **Procor™ 20** - trowelling grade for vertical and inclined surfaces.
- **Procor™ 10** - spreading grade for horizontal surfaces and upstands up to 600mm.
- **Servipak™ 3** - protection board.
- **Servidrain™ Sheet 220** - for dual protection and drainage of below ground walls.

Principal Applications

New and remedial waterproofing of:

- Concrete and masonry basements



Retaining walls
Lift pits
Service ducts
Split level foundations
Ground bearing floor slabs
Wet room floors

Refer to separate datasheet for use of Procor™ Liquid Waterproofing on elevated concrete decks.

System Advantages

- Waterproof - resists a hydrostatic head in excess of 20 metres
- Safe in use - non hazardous product with no harmful solvents
- Primerless - applied directly to the substrate

- Damp surface tolerant - can be applied to damp to touch surfaces
- Jointless - continuous waterproofing integrity
- Flexible - accommodates minor structural settlement and bridges cracks
- Low Odour - avoids noxious fumes
- Versatile - easy to use at pipe entries, upstands, column bases etc

Design

Structures below ground level should be designed in accordance with BS 8102:1990.

Storage

Store under cover in original sealed containers at ambient temperatures of between +4°C and +30°C.

Shelf life is 9 months in unopened containers.

Compatibility

Procor™ can be used with the following materials:

PVC

Polyethylene

Hypalon

Expanded polystyrene

Preprufe™

Bituthene™ Sheet Membranes

Check for other compatibilities and jointing details with Grace Technical Services.

Limitations

Procor™ cannot be used as a permanently exposed waterproof membrane.

Do not use part mixes.

When mixed use all the mixed material.

Application

Application Temperature Range

Procor™ can be applied when the ambient temperature is between +4°C and +38°C.

Tools Required

- Wire brush
- Stiff broom
- Pointing trowel
- Steel plastering trowel
- Wet film thickness gauge or steel rule.

Optional Tools

- Heavy Duty Drill
300 - 500 rpm (110 or 220v)
- MR2 mixing paddle (from Grace Construction Products)

Surface Preparation

All cementitious surfaces should be wood float or shutter finish and free from large voids and frost. Abrupt irregularities greater than 3mm should be removed or filled. Masonry walls should be flush pointed or bagged.

All substrates must be wire brushed or swept with a stiff broom to remove dirt, dust and loose stones. Procor™ liquid waterproofing membrane can be applied to damp to touch substrates but all ponded surface water must be removed.

On highly porous and rough substrates it may be necessary to apply a surface conditioner or a scratch coat of Procor™ before applying the liquid membrane. Contact Grace Technical services for further details.

Mixing

Procor™ liquid waterproofing membrane is supplied as a two component product and can be mixed either mechanically or manually.

Mechanical Mixing

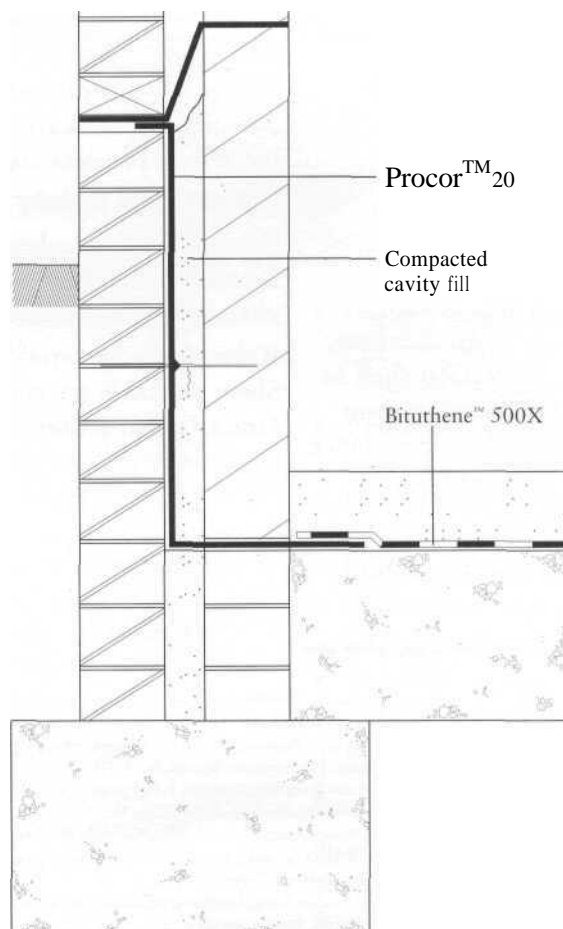
Use a 300 - 500 rpm heavy duty drill and MR2 paddle. Pre mix Part A for 30 seconds then add Part B. Mix for 3 minutes until an homogenous colour, free of streaks is achieved. Scrape unmixed material from the side of the bucket and mix in. Overmixing will cause excessive thickening.

Manual Mixing

Use a 50mm x 50mm batten. Pre mix Part A for 30 seconds then add Part B. Stir vigorously for 3 minutes or until an homogenous colour, free of streaks is achieved. Scrape unmixed material from the side of the bucket and mix in.

Overmixing will cause excessive thickening.

Do not leave mixed material in the bucket. Mixed Procor™ left in the bucket will reach temperatures above 100°C and could cause burns.



Tanking within cavity of masonry structure

Typical illustration only and not a working detail

Application

1. Detailing

Pipe Entries

Apply a 1.5 mm thick layer of Procor™ 20 continuously around and onto the pipe. Use a pointing trowel to form an angle fillet which should be left to partially cure prior to applying the overall membrane.

2. Vertical Application

Procor™ 20 is recommended for vertical applications in excess of 600mm.

At 1.5 mm thickness coverage will be around 4.5 m² per 7.5 litre unit to flush pointed masonry.

Application thickness is controlled by marking out this area and spot checking thickness with a wet film thickness gauge or steel rule as work proceeds. The liquid membrane is best applied using a pour and trowel technique.

Starting at the bottom pour the Procor™ onto the wall directly from the bucket and spread with a plasterers trowel. Swipe and trowel marks are acceptable as long as minimum thickness is maintained. Do not overwork the material.

3. Horizontal Application

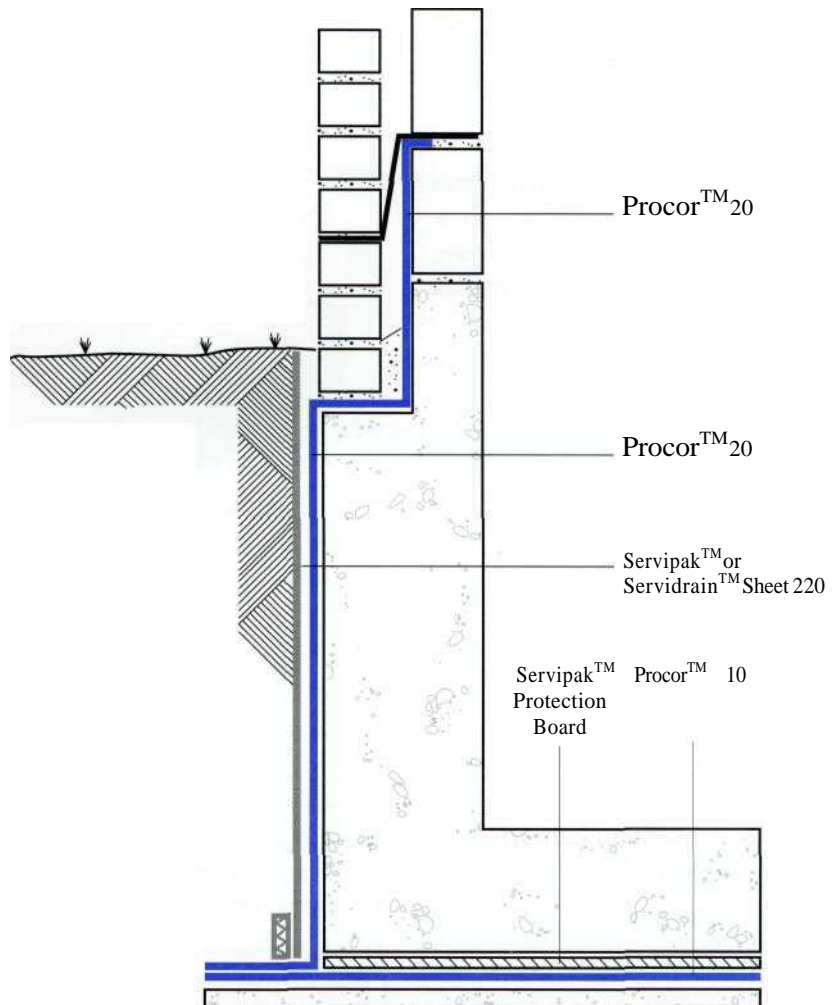
Procor™ 10 is recommended for horizontal applications. At 1.5 mm thickness coverage will be around 12 m² per 20 litre unit to wood float finish concrete.

Procor™ 10 is best applied using a pour and spread technique, using a steel float or a flexible caulking tool. A rubber squeegee is not recommended. Swipe and trowel marks are acceptable as long as the minimum thickness is maintained. Plan the application sequence so that there is no need to walk back onto the membrane. The membrane can accept foot traffic typically after typically 12-16 hours at 20°C.

Procor™ should be protected against physical damage from construction activities within 24 hours of application.

Servipak™3 protection boards or Servidrain™ Sheet 220 combined protection and drainage sheets will bond directly to Procor™ without the need for additional adhesives.

Procor™ applied horizontally can be protected with a minimum 25 mm screed as an alternative to Servipak™3 or Servidrain™ Sheet 220. Residual surface tackiness on the membrane can be removed by light cement dusting if required.



External Tanking to Concrete Substructure

Typical illustration only and not a working detail

Product	Nominal Thickness	Unit of Sale	Weight	Palletisation
Procor™20	1.5mm	7.5 litre pack	9.5 kg	50 packs per pallet
Procor™ 10	1.5mm	20 litre pack	24 kg	16 packs per pallet
Servipak 3 protection board	3mm	1.0m x 2.0m boards	8 kg	200 boards per pallet
Servidrain Sheet MR2 Paddle	11mm	1.22m x 31.7m rolls each	41 kg	

Property	Typical Value	Test Method
Resistance to hydrostatic head over 3mm post formed crack	20m	ASTM D5385
Peel adhesion to concrete	0.9 N/mm	ASTM C903
Peel adhesion to self	0.9 N/mm	ASTM C903
Elongation	500%	ASTM D412
Pliability, 180° bend over 25mm mandrel at -30°C	unaffected	ASTM D1970
Pot life	30 minutes at 20°C 60 minutes at 10°C	
Solids content	100%	ASTM D1644
Colour (component A)	terracotta	
Colour (component B)	white	
Water Vapour Transmission	1.98g/m ² .24hrs	ASTM E96 (BW METHOD)

Specification Clauses

Below ground areas shall be waterproofed with Procor™ cold applied liquid waterproof membrane system supplied by Grace Construction Products Limited, Ajax Avenue, Slough, Berkshire, SL1 4BH. All detailing, application and protection shall be carried out using Procor™ system components installed in accordance with the instructions of Grace Construction Products.

Specimen performance and formatted specifications for individual projects are available.

Health and Safety

Procor™ is a low odour, non hazardous material which cures chemically when mixed.

Refer to the Material Safety Data Sheet available separately from Grace Construction Products.

Typical Coverage Rates		
Product	Thickness (mm)	m ²
Procor™20	1.5	4.5
Procor™ 10	1.5	12.0

