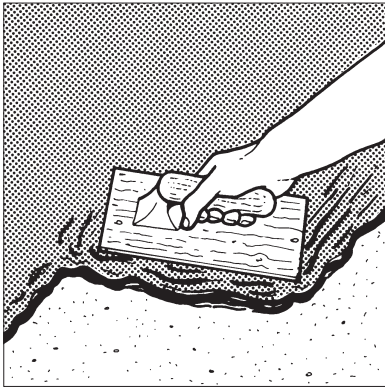


Product



- THIS DETAIL SHEET RELATES TO GUARAFLEX R TANKING SYSTEM.
- The system is for use in internal and external waterproofing and damp-proof applications.

The Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the applications, and the Conditions of Certification, respectively.


Design Data

1 General

1.1 Guaraflex R Tanking System is satisfactory for use as below ground waterproofing on substrates of concrete, brickwork, blockwork or masonry constructions, or as a damp-proof membrane for solid floors (see Figure 1).

1.2 The membrane is compatible with the substrate listed in section 1.1 and is resistant to those chemicals likely to occur in normal practice. If doubt arises on the compatibility with other materials, the advice of the manufacturer should be sought.

2 Weathertightness

 2.1 Data examined confirm that when completely sealed and consolidated, the membrane will adequately resist the passage of moisture to the inside of the building and so meet or satisfy the relevant requirements of the national Building Regulations thus:

England and Wales

Approved Document C, Section 3, Requirement C4

Scotland

Regulation 17, Standard G2.6

Northern Ireland

Regulation C4.

2.2 The membrane is impervious to water and, when used in the systems described will give a waterproofing layer capable of accepting minor structural movements without damage.

3 Resistance to foot traffic

3.1 From tests it is indicated that provided there are no sharp objects present on the membrane's surface prior to and during installation of the protective layer above, it will not be damaged by normal foot traffic.

3.2 The membrane can accept, without damage distributed loads. Concentrated point loads can cause damage and should be avoided.

4 Properties in relation to fire



When used in the specifications described in this Detail Sheet, the membrane is not subject to the Fire Regulations.

5 Durability



Guaraflex R, when fully protected and subjected to normal service conditions, will provide an effective barrier to the transmission of liquid water and water vapour for the design life of the structure in which it is incorporated.

Installation

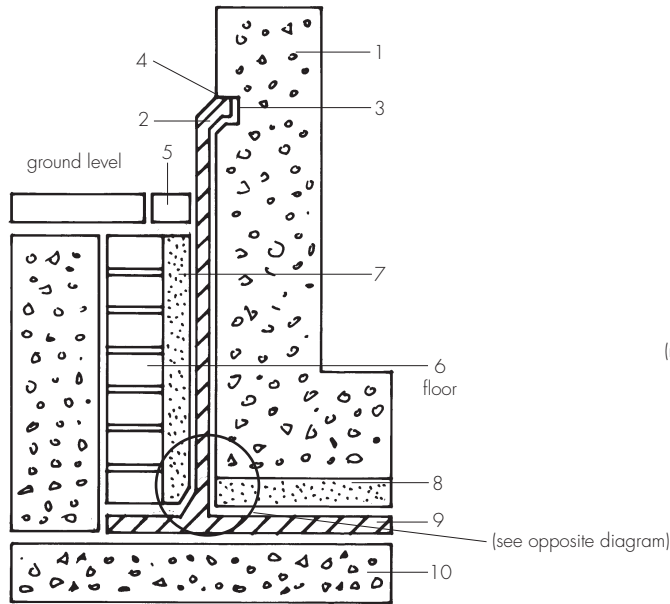
6 Procedure

General

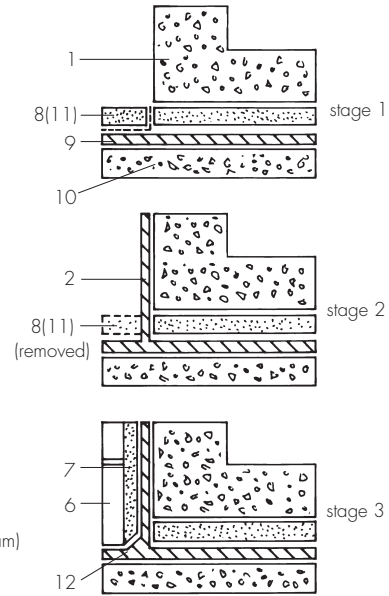
6.1 Surfaces must be dry, clean, and free from sharp projections and concrete nibs.

6.2 Guaraflex R Tanking System must be installed in accordance with the relevant requirements of CP 102 : 1973 Section 2, BS 8102 : 1996 and the manufacturer's instructions.

Figure 1 Design Specification



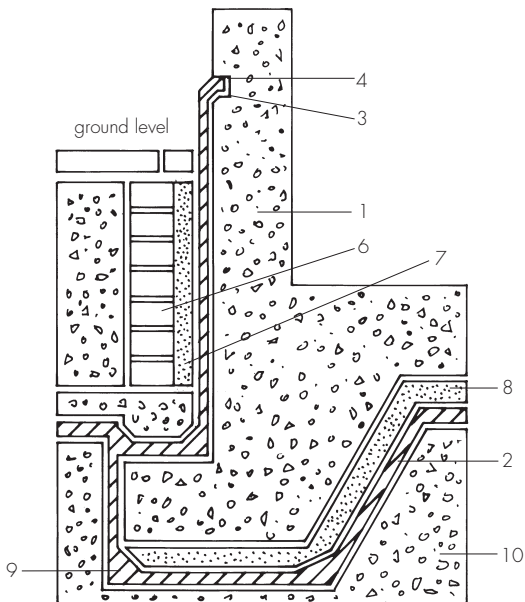
1. Externally-applied Guaraflex PR tanking to concrete



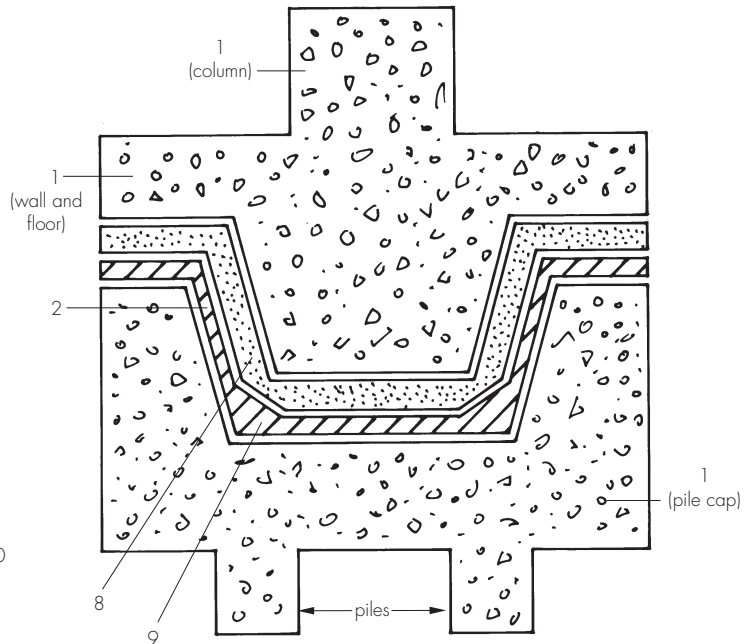
2. Tanking detail of 'pick up' in sequence

- 1 structural reinforced concrete
- 2 20 mm three-coat Guaraflex PR with fillet to horizontal
- 3 25 mm x 25 mm chase cast in concrete
- 4 cement mortar pointing
- 5 paving slab (75 mm gap filled with gravel)
- 6 protecting wall (brickwork)

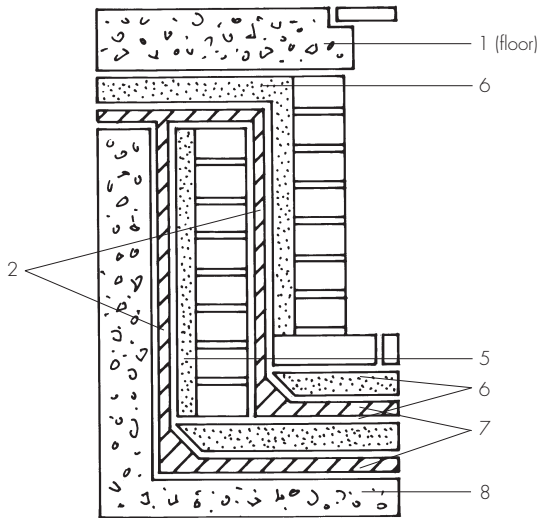
- 7 40 mm space flushed up with mortar (course by course)
- 8 50 mm protective sand/cement screed
- 9 30 mm three-coat Guaraflex PR
- 10 concrete base
- 11 building paper (under pick-up only)
- 12 two-coat fillet



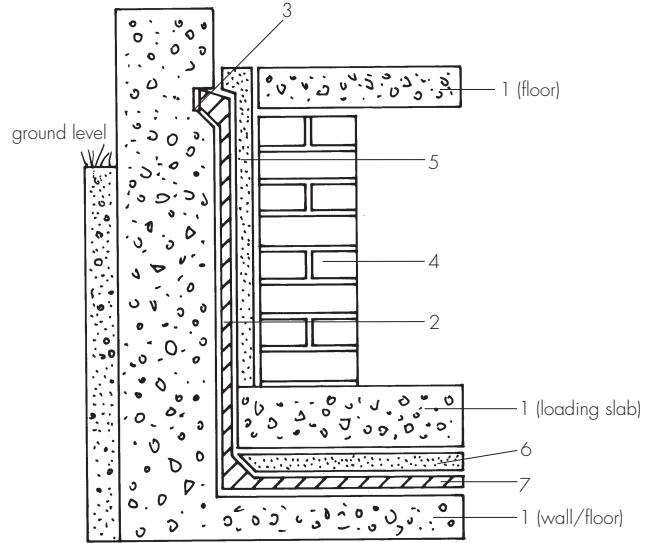
3. Externally-applied Guaraflex PR tanking under foundations



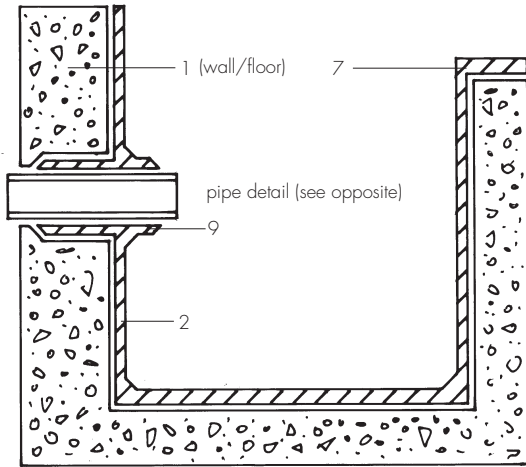
4. Externally-applied Guaraflex PR tanking over pile caps or under column bases



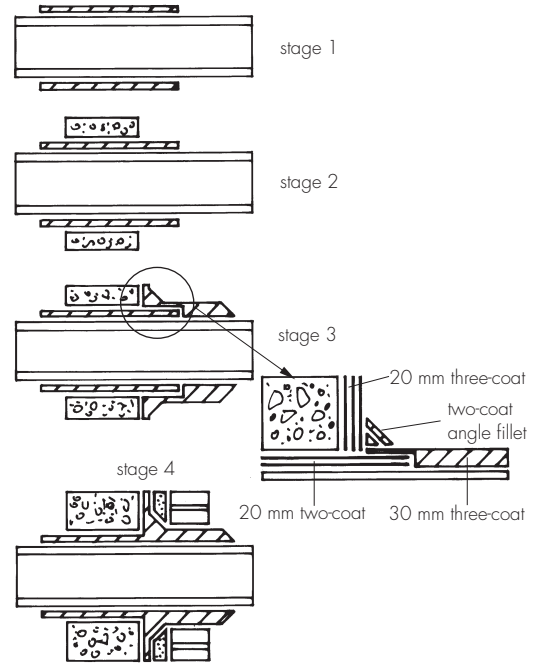
5. Externally-applied Guaraflex PR tanked basement as a sump or inspection chamber



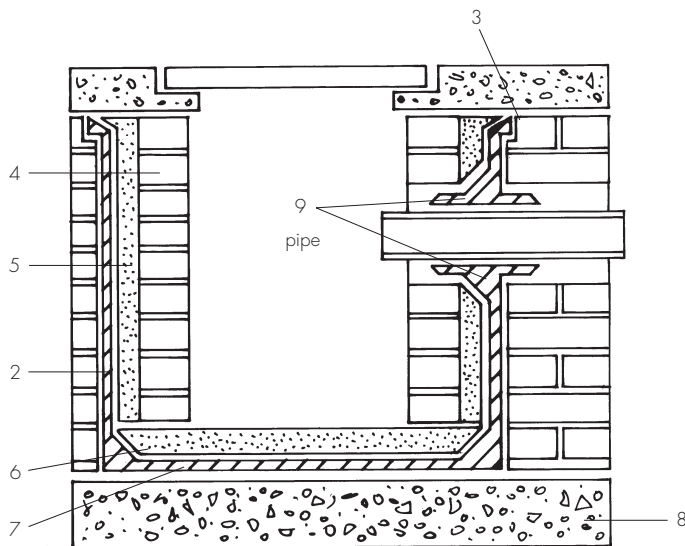
6. Internally-applied Guaraflex PR tanking



7a. Guaraflex PR lining to cold water storage tanks



7b. Provision of service pipe passing through Guaraflex PR tanking or tank lining



8. Guaraflex PR lining to catch pit for discharge of hot liquid

- 1 structural reinforced concrete
- 2 20 mm three-coat Guaraflex PR with fillet to horizontal
- 3 25 mm x 25 mm chase cast in concrete and cut in brickwork
- 4 protecting wall (brickwork)
- 5 40 mm space flushed up with mortar (course by course)
- 6 50 mm protective sand/cement screed
- 7 30 mm three-coat Guaraflex PR
- 8 concrete base
- 9 Guaraflex PR sleeve to pipe

6.3 Concrete substrates must be wood float or shutter finish and free from large voids and sharp projections such as concrete nibs. Any abrupt irregularities greater than 3 mm must be removed or filled prior to application.

6.4 New concrete should be well compacted and finished, preferably by power floating and power trowelling, without excessive laitance, to a dense, smooth finish free from defects. Concrete toppings/screeds should be properly formulated, applied and compacted. They should be bonded to the substrate and have a wood-floated finish with minimum laitance.

6.5 A minimum curing period of 28 days is normally allowed before installing the product on new concrete substrates.

6.6 Substrates should be free from physical defects such as cracks. Small surface defects can be filled with a proprietary mortar.

6.7 The surface must be dry, clean and free from loose particles, paint, grease and oil, or other contaminants which may affect the application of the product.

6.8 When application is made to an old substrate the advice of Guaranteed Asphalt Ltd must be sought.

6.9 Installation of the waterproofing layer should be carried out using the techniques for laying mastic asphalt described in the relevant clauses of BS 8218 : 1998. Where not controlled by hot charge delivery, advice on the laying temperature should be obtained from the Certificate holder.

6.10 If required, Guaraflex PR waterproofing, can be applied over Guaraflex CP or Guaraflex CP Super felt isolating membranes.

6.11 Gauges should be used to ensure the correct thickness of Guaraflex PR and to provide a bonding edge between adjacent bays of asphalt.

6.12 The membrane should be protected against damage from construction activities normally within 24 hours of application. The vertical membrane can be protected with a brick or block wall.

Pipe detailing [see Figure 1(7.b)]

6.13 Pipes manufactured from coated or uncoated cast-iron mild steel or pitch fibre pipes are cleaned and brushed prior to painting with a primer coat. The primed pipe is sleeved with two coats of Guaraflex PR tanking.

6.14 The Guaraflex PR sleeve portion of the pipe to be built into the structure must project 75 mm before further Guaraflex PR is applied.

6.15 Guaraflex PR Tanking is then applied up to the Guaraflex PR sleeve which is warmed and cleaned to ensure a sound joint. Additional coats are applied as a collar over the Guaraflex PR and pipe (clipped if necessary) and finished with an application of a two-coat angle fillet.

6.16 A protecting wall is constructed if the tanking is external or a loading wall or slab if the tanking is internal.

Bibliography

BS 8102 : 1990 *Code of practice for protection of structures against water from the ground*

BS 8218 : 1998 *Code of practice for mastic asphalt roofing*

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*



On behalf of the British Board of Agrément

A handwritten signature in black ink, appearing to read 'P. C. Newson'.

Date of Second issue: 11th December 2002

Chief Executive

**Original Detail Sheet issued 30th March 2000. This amended version includes revised national Building Regulations, change of format, the addition of installation diagrams and change of application detail.*