



CE n55Plus

CI/SfB

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September 2013

RIW CAVITY DRAIN R20

Cavity Drain R20 is manufactured from 1.0mm thick black high density polyethylene with studs approximately 20mm high.

Other systems are available for specific uses, refer to Typical Uses inside.

BENEFITS

- ┆ Easy to install
- ┆ High drainage capacity
- ┆ High factor of safety
- ┆ High compressive strength
- ┆ Chemically resistant
- ┆ Can be applied to wet substrates

APPLICATIONS

- ┆ Basement and Sub-structures

APPLIED TO

- ┆ Concrete
- ┆ Masonry
- ┆ Piled walls

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waterproof RIW

RIW CAVITY DRAIN R20

TYPICAL USES

Cavity Drain R20 is used in situations where site conditions or structural design make it difficult or impossible to use traditional tanking methods. Cavity Drain R20 is used to collect water entering the structure and channel it to a sump or collection point for disposal (see details).

When designing Type C (drained) protection, as classified in BS 8102: 2009, the product applied correctly, is capable of providing the levels of protection required for Grade 1, 2 & 3 basements.

The product can also be used in conjunction with Type A or B protection where additional combined protection is required.

Other systems available are:

Cavity Drain R7 - suitable for use vertically where a smaller drainage capacity system is sufficient.

Plaster Drain - suitable for use where walls are to be finished with a plaster or render.

PERFORMANCE & COMPOSITION

Form	HDPE profiled sheet
Colour	Black
Thickness	1.0mm
Stud height	20mm
Roll size	2m wide x 20m long
Weight	0.95kg/m ²
Laps	100 mm (2 studs)
Maximum drainage capacity	13 litres/sec/metre length
Working temperature	- 50 °C to 80 °C
Maximum compressive strength	150kN/m ²

The above performance figures are typical values and should not be considered a product specification.

DURABILITY

Subject to normal conditions of use Cavity Drain R20 will provide an effective barrier to the transmission of water and water vapour for the life of the structure.

SPECIFICATION

J40-Sheet Tanking/Damp Proofing in accordance with NBS Clause 290. Please consult for further information.

INDEPENDENT AUTHORITY

Cavity Drain R20 has been awarded British Board of Agrément Certificate No. 05/4232, covering its use on walls and floors above and below ground.



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EN 13967:2012 & EN 13984:2013 High performance damp proof ventilating and drainage sheet and ventilating and draining vapour control layer.

Reaction to fire:	Class F
Tensile strength properties (Minimum)	
MD	530 N/50mm
CMD	500 N/50mm
Resistance to static loading:	Pass at 20kg
Resistance to impact:	Pass at 0.85m
Resistance to tearing (Minimum):	350N
Joint strength:	35N
Watertightness: Durability	Pass at 2KPa
- After heat ageing	Pass
- After Chemical ageing	Pass
Water vapour resistance: Durability	550m +/- 25%
- After heat ageing	Pass
Durability against alkali:	Pass
Bitumen compatibility:	Degradation of 15% max
Dangerous substances	None
Resistance to deformation under load:	20% at 50 kN/m ²

ANCILLARY PRODUCTS

RIW produce a range of ancillary products for use with Cavity Drain R20 which include:

Sealing Rope - a self-adhesive rope for sealing between individual sheets and around services, fixings etc.

Brick Plugs - a fixing plug for vertical fixing of the Cavity Drain.

Overtape - a self-adhesive tape used to seal over joints, when necessary.

Sealing Tape - a self-adhesive tape to join DPCs etc. to the Cavity Drain R20.

Aqua Channel - an internal peripheral drainage channel for use at the base of the wall.

Sump & Pumps also available; see separate data.

CONSTRUCTION

GENERAL

All construction should conform with the Building Regulations, Codes of Practice and British Standards in current use at the time the building is being constructed. In particular it is recommended that reference is made to BS 8102:2009.

PREPARATION

All surfaces: Should be firm, and free from obstructions, which would hamper free drainage. Defects that might result in unacceptable leaks should be remedied before the system is installed.

Horizontal surfaces: Should ideally be laid to falls to drainage outlets. Flat slabs are acceptable, provided 'ponding' water is not in excess of 20mm deep.

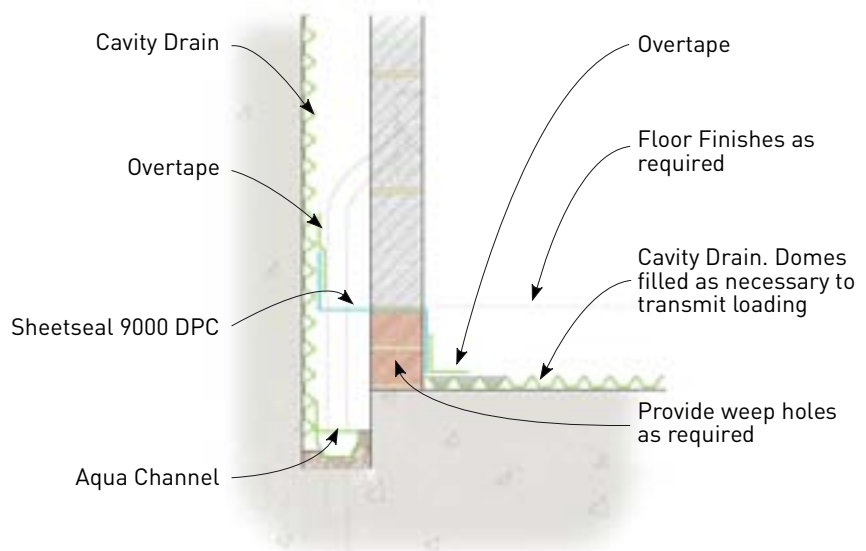
Concrete surfaces: Should be pre-treated with Cementseal Primer to reduce the risk of leaching of free lime or mineral salts, and to avoid the obstruction of the drainage system.

APPLICATION

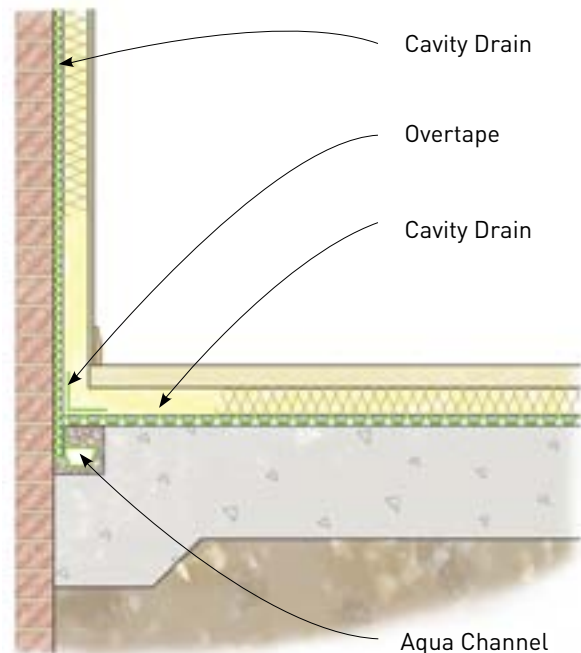
Horizontal: The membrane is laid out 'domes down' over the floor, and consecutive membrane widths are laid so an overlap of two interlocking domes is achieved. There should be no fixings applied through the floor membrane.

Vertical: Installation of the Cavity Drain R20 is ideally commenced at the top of the construction. Sheets are interlocked by two domes, giving an overlap of 100mm. The lower sheet is always positioned in front of the upper sheet, to form a 'weathered lap'.

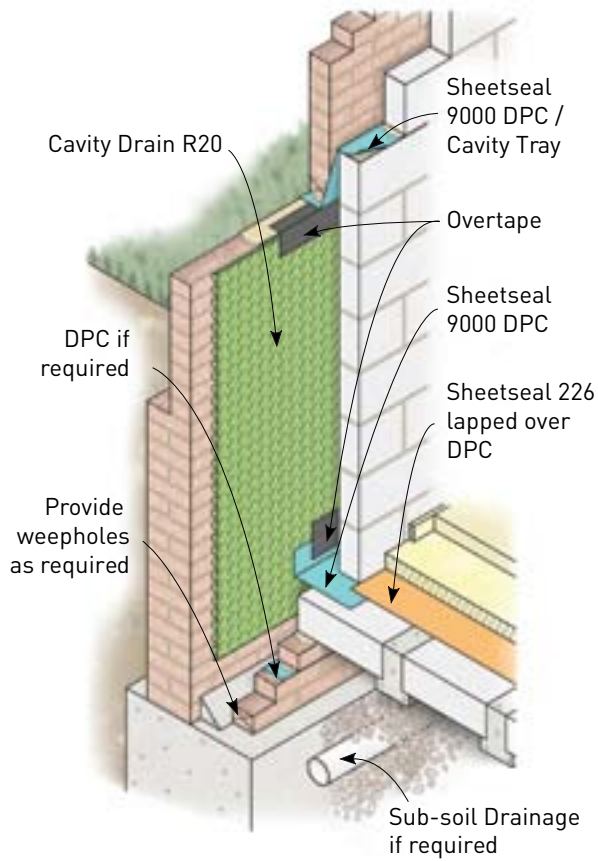
Fixings: Should be made, using Brick Plugs, into 10mm diameter drilled holes to a minimum depth of 75mm (use punch). Fixings are sealed with Sealing Rope, which is packed around the brick plug before positioning. The fixings are normally required at 1.0m centres, and should be staggered.



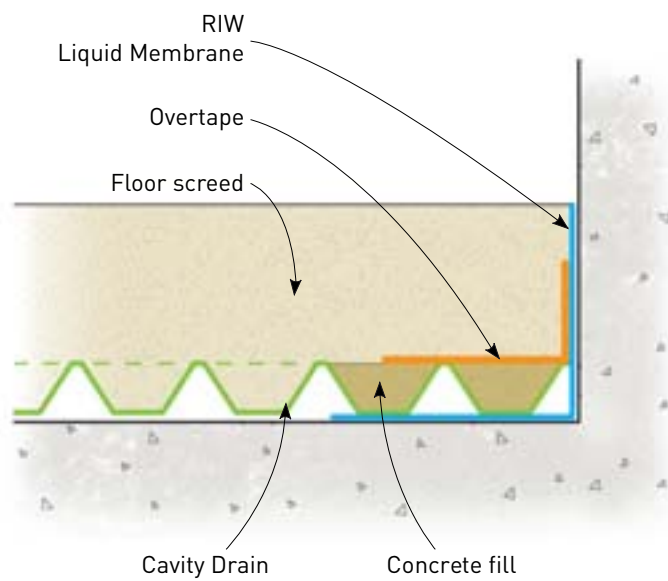
Wall Floor Junction with Masonry Lining Wall



Wall Floor Junction with Dry Lining System



Suspended floor detail



Detail at columns, service pipes etc

All overlaps: Should be sealed using a run of Sealing Rope placed along the flat area of the Cavity Drain membrane between the two rows of domes. The outer edge of the sheet should be covered with Overtape.

Wall/floor junctions: Incorporate Aqua Channel as per typical details. Alternatively, the horizontal and vertical sheets should be butt jointed at the base of the wall, the joint is then covered with Overtape. The dimples that will be covered by Overtape must be filled with a suitable strength concrete or mortar and allowed to dry. The surface should then be cleaned prior to application of Overtape.

Column/Service penetrations: The Cavity Drain R20 should be cut so it forms a butt joint against any projections, and then sealed with Sealing Rope. The two rows of dimples surrounding the penetration should be filled as for Wall/Floor Junctions. See Detail.

Protection: As soon as possible after application of the horizontal cavity membrane, the finishes should be laid. Care must be taken to avoid displacing the Cavity Drain R20 during screed or concrete placement. Walkways over the horizontal membrane should be provided to prevent damage during following works.

Vertical surfaces should be protected, by casting concrete against the Cavity Drain R20, or by building an inner masonry wall. Inner masonry walls may be tied back into the Cavity Drain R20, by fixing into the Brick Plugs. A similar method can be adopted should a 'dry lining' system be required.

Any damaged areas must be repaired, by cutting a patch at least two dimples larger than the damaged area. The patch is then overlaid and the edges sealed using Sealing Rope and Overtape as elsewhere.

Drainage: A drainage system of suitable capacity should be provided to collect and dispose of the infiltrating water. The system must be maintainable and inspected at regular intervals.

SUPPLY

AVAILABILITY

All products can be obtained through Builders Merchants or approved stockists. A list of approved stockists is available from RIW's offices.

PACKAGING

Cavity Drain R20	2m wide x 20m long rolls
Brick Plugs	Box of 100
Sealing Rope	10mm diameter x 5m long rolls
Sealing Tape	30 x 2mm x 20m long rolls
Overtape	150mm wide x 10m long rolls
Aqua Channel	2m Lengths

STORAGE

There are no special requirements but rolls should be kept upright under cover and protected from extremes of temperature.

TECHNICAL SERVICES

The Technical Department is available to advise on individual projects and to prepare or assist in the preparation of specifications and drawings. A list of experienced applicators of our materials is available from RIW's offices.

The information in this literature was correct at the time of going to press. However, we are committed to continually improving our products and reserve the right to change product specifications.

For the latest information, please consult RIW. Conditions of use are beyond our control, therefore we cannot warrant the results to be obtained.

RIW

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