

# RIW SHEETSEAL GR

Sheetseal GR is a cold applied, high density polyethylene film bonded to aluminium foil and coated with a bitumen/rubber self adhesive layer with a removable reinforced silicone release paper.

Sheetseal Primer is a bitumen solution.

## BENEFITS

- | Compliant with BS 8485: 2015
- | Methane and carbon dioxide barrier
- | Water and water vapour barrier
- | Factory controlled thickness
- | Elastic and flexible
- | No drying time
- | Selvege strip to improve lap sealing
- | Complies with latest codes of practice as published by CIRIA & BRE

## APPLICATIONS

- | Combined tanking membrane and gas barrier
- | Suppression of methane and carbon dioxide
- | Ground floors
- | Basements and sub-structures
- | Retaining walls

## APPLIED TO

- | Concrete
- | Masonry
- | Steel
- | Insulation boards / ICF systems

# RIW SHEETSEAL GR

## TYPICAL USES

Sheetseal GR protects the structure against methane, carbon dioxide and radon from the ground. In addition, Sheetseal GR provides a water and water vapour barrier. When designing a Type A (barrier) protection (as classified in BS 8102:2009), the product applied correctly is capable of providing the levels of protection required for grades 1, 2 & 3 basements.

Sheetseal Primer is used on all surfaces, to aid adhesion of the Sheetseal GR membrane. Sheetseal Primer must however not be applied to ICF systems.

## DURABILITY

Subject to normal conditions of use Sheetseal GR will provide an effective barrier to methane gas, water and water vapour for the life of the structure. The membrane is not designed for permanent exposure and must be protected by a screed, paving slabs, insulation etc.

## INDEPENDENT AUTHORITY

Independently tested to ISO 15105 and therefore complies with BS 8485:2015.

For Declaration of Performance see <http://www.riw.co.uk/technical-downloads/ce-marking>

## PERFORMANCE & COMPOSITION

SHEETSEAL GR	
Form	Self adhesive sheet
Backing material	Cross orientated polyethylene with aluminium laminate
Overall thickness	1.30mm
Roll size	1m x 20m long
Roll Weight	34kg
Laps	150mm
Tape strength	(EN 12113B) Trans 4.2 N/mm Long 3.9 N/mm
Elongation	(EN 12113B) Trans 8% Long 6%
Puncture resistance	(ASTM E 154) 180 N
Adhesion – 180° peel	(ASTM D1000) 1.8 N/mm
Water vapour transmission	(ASTM E96) <0.1g/m <sup>2</sup> /24 h
Application Temperature	+5°C to +35°C

SHEETSEAL PRIMER	
Form	Bitumen solution
Flash point	34°C
Coverage*	7m <sup>2</sup> /litre/coat
Drying time	2–4 hours
Overcoating time	Minimum: when touch dry Maximum: 7 days

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

## SPECIFICATION

J40 – Flexible Sheet Tanking/Damp proofing in accordance with NBS Clause 180.

Please consult RIW for further information.

## ANCILLARY PRODUCTS

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RIW produce a range of ancillary products for use with Sheetseal GR which include:

**Cementfill FC** – Cement based waterproof fairing coat and repair mortar for filling minor holes, voids and defects.

**Cementfill HB** – Cement based waterproof high build repair mortar for profiling and providing fillets.

**Gas Seal GR DPC** – Gas resistant damp proof course/cavity tray for building into masonry.

**Gas Seal Black** – 2000g loose laid damp proof/gas resistant membrane.

**Double Drain** – a drainage board which protects the membrane during backfilling operations, and also promotes drainage of water away from the structure.

**Protection Board** – a 3mm thick bitumen impregnated fibre board to prevent damage to the membrane during backfilling operations.

**Adhesive Tape** – a 150mm wide double sided tape for temporarily adhering Double Drain or Protection Board to the RIW membrane.

## CONSTRUCTION

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### 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 Code of Practice for Protection of Below Ground Structures Against Water from the Ground, and BS 8485: 2015 Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Gases for New Buildings.

### PREPARATION

**All Surfaces:** Should be smooth, clean, dry (to a depth of 1–2mm), sound and free from frost, oil, grease, condensation and other contamination. Any voids or hollows must be made good to a flush finish with a suitable filler. Any sharp edges or high points should be eliminated. Powdery or flaking surfaces should be removed by suitable means. Internal corners should be eased with a 50 x 50mm cement fillet (see ancillary products), to assist application, similarly, external corners should be chamfered or rounded where required.

**Concrete Surfaces:** Horizontal surfaces should preferably be smooth, however lightly tamped (3–4 mm peak to trough profile), brushed or floated surfaces may also be acceptable.

**Masonry:** Should be sound with joints flush pointed or 'bagged out' with Cementfill FC or similar before the membrane is applied. Open textured surfaces should be sealed with Cementfill FC or a sand/cement slurry or render to provide a suitable surface. If existing surfaces are very rough, they may require rendering.

### APPLICATION

**General:** Application of Sheetseal GR and Sheetseal Primer should not be attempted in temperatures below 5°C. Apply one coat of Sheetseal Primer to all vertical or inclined surfaces. The primer should be applied, where required, by brush, roller or spray at a coverage of approximately 7m<sup>2</sup>/litre. The primer should dry in 2–4 hours depending on site conditions. The primer should be covered as soon as it is dry and should not be left exposed for longer than seven days.

Do not use Sheetseal Primer onto insulation boards or insulated concrete formwork (ICF) systems.

Vertical work should be supported immediately after application, or temporary support provided. **Maximum unsupported height of membrane should not exceed 200mm.**

To apply the Sheetseal GR, remove the separating paper progressively from one end of the roll, and press the adhesive coated surface firmly onto the prepared substrate. Smooth out the membrane working from the centre to the edges to remove air pockets. Any remaining bubbles should be slit with a sharp knife and re-adhered. Patches of sufficient size must then be applied over the slits or any other damaged areas to maintain a minimum overlap of 150 mm. A hard roller should then be used to firm down the whole area. The peel off seldge strip should then be removed from the top edge to reveal a bitumen surface.

Subsequent rolls should then be lapped onto the previous roll. Edge laps should be a minimum of 150mm wide and end laps 150mm. The overlaps should not be primed, but should be rolled with a hard roller to ensure good adhesion. Sheetseal GR is not designed to be left exposed and should be protected from UV light within 28 days of application. Interior and exterior corners should be treated as illustrated in Detail 7 of this literature. The full membrane should then be applied.

Internal angles and corners should be covered with a 300mm strip of Sheetseal GR applied into the angle. The full membrane should then be dressed into the angle to form a triple layer as illustrated in Detail 5 of this literature. External corners should be covered with a 300mm strip of Sheetseal GR. The full membrane is then applied ensuring that overlaps occur at the angle to give three layer protection as illustrated in Detail 6 of this literature.

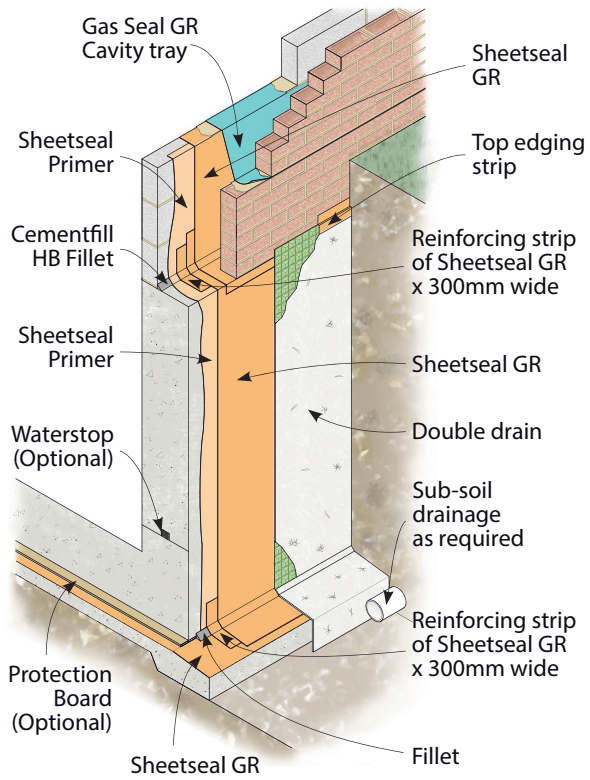
### SPECIFIC USES

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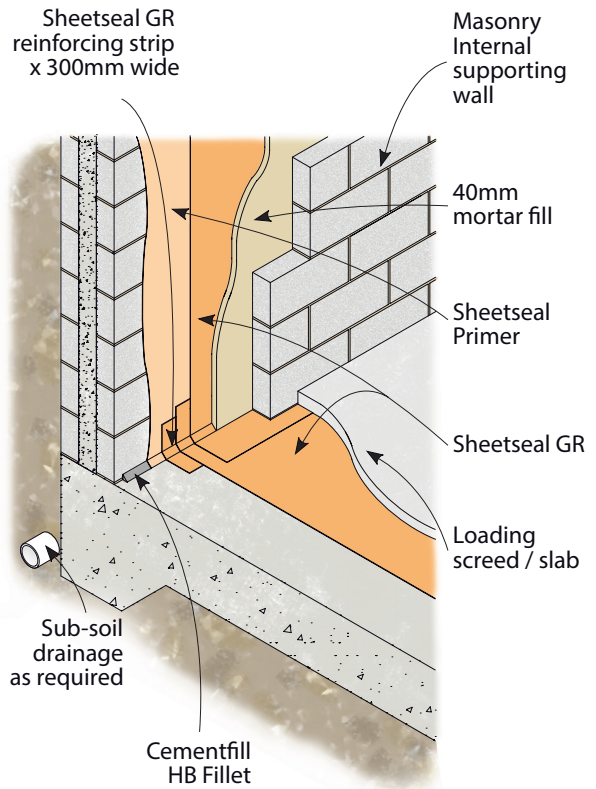
Sheetseal GR should be installed in accordance with the current guidance for gas protection systems, including BRE 211/414, CIRIA C665 & BS 8485: 2015.

**Tanking:** Sheetseal GR must always be fully supported, to resist hydrostatic pressure, when used for tanking.

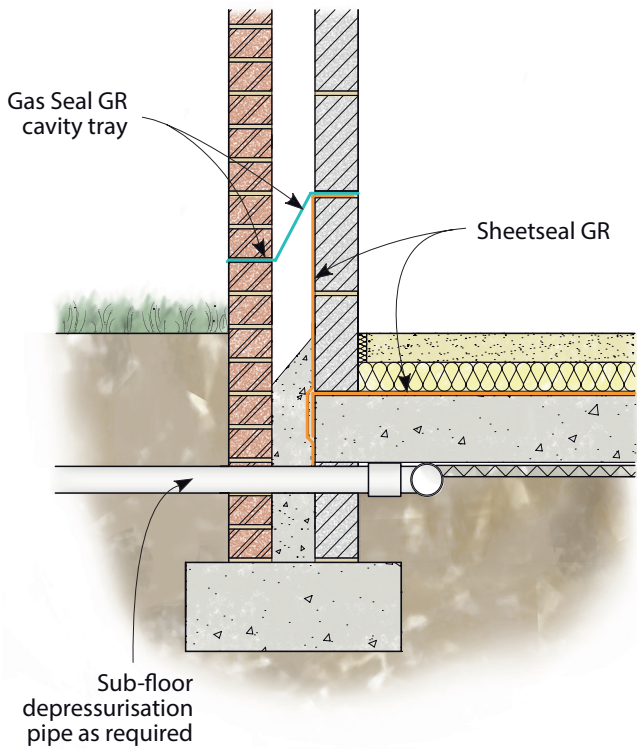
**External Tanking:** Should be carried out as illustrated in Detail 1 of this literature. The horizontal membrane should be laid on a concrete blinding to project at least 200mm beyond the outer face of the structure.



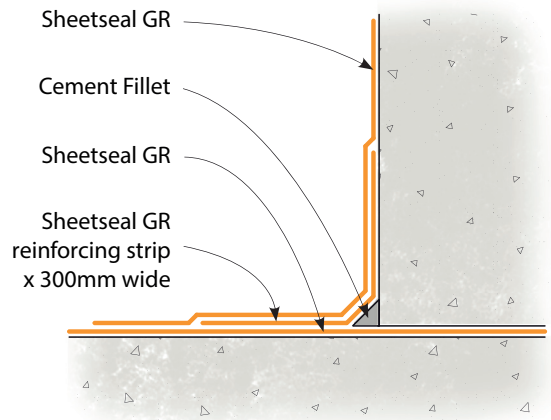
**Detail 1 - External Tanking**



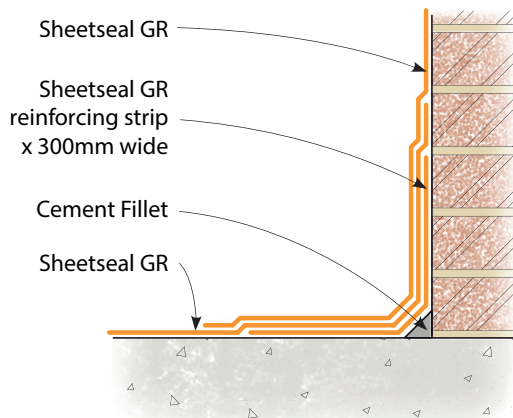
**Detail 2 - Internal Tanking**



**Detail 3 - Ground Floor DPM/Gas Barrier**



**Detail 4 - External Continuity Detail**



**Detail 5 - Internal angle**

## SPECIFIC USES (CONTINUED)

The base structural slabs and the walls should be formed, incorporating a fillet at the external base of the wall, the angle should then be treated as illustrated in Detail 4 of this literature. The remainder of the vertical membrane should then be applied and protected from backfill material using Double Drain or Protection Board to suit.

**Internal Tanking:** Should be carried out as illustrated in Detail 2 of this literature. A loading coat of brick, block or concrete should be constructed immediately after the membrane has been placed. If brickwork or blockwork has been used a 40 mm minimum cavity should be left between the membrane and the loading skin. This cavity must be filled with a sand/cement mortar fill as the work proceeds.

**Floating floor construction:** Sheetseal GR can be used to provide a methane barrier under a floating floor system at ground floor level; see Detail 3. When used under insulation the following guidelines should be followed:

- The insulation boards must be laid butt jointed, with corners and arises kept intact to ensure overall loading of the membrane.
- The floor finish must not displace the insulation boards during laying.

## SAFETY

Sheetseal Primer is flammable and should be used in well-ventilated areas away from sources of ignition. The product can effect sensitive skins. Gloves or barrier cream should always be used by operatives and hands thoroughly washed at the end of each working period. Do not allow the product to enter watercourses. Full health and safety instructions are contained on the product material safety data sheets, and these must be referred to before use.

## SUPPLY

### AVAILABILITY

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

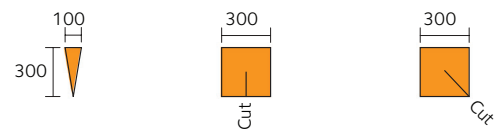
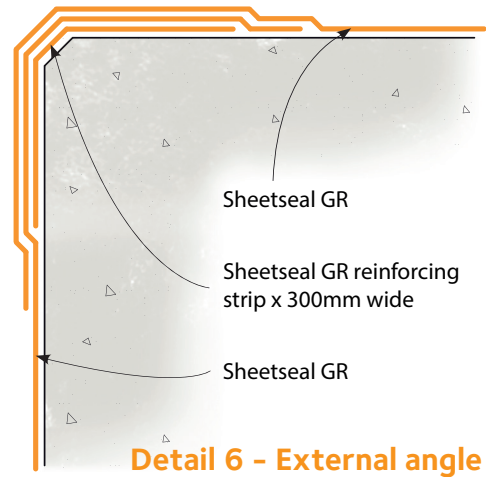
### PACKAGING

Sheetseal GR	1 m x 20m long roll
Sheetseal Primer	5 & 25 litre containers

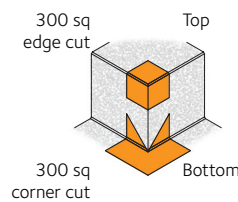
### STORAGE

Sheetseal GR: Store upright and under cover in conditions below 30°C.

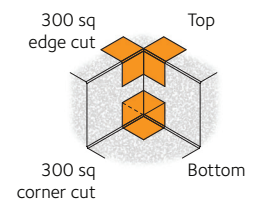
Sheetseal Primer: There are no special requirements. The material may be stored in severe winter environments without any detrimental effect.



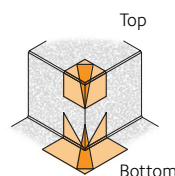
Stage 1



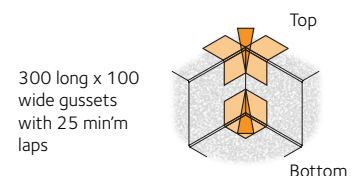
Stage 1



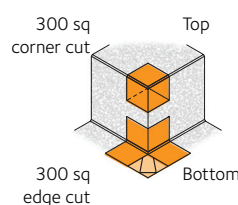
Stage 2



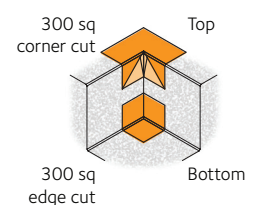
Stage 2



Stage 3



Stage 3



**Exterior Corner  
Detail 7**

**Interior Corner  
Detail 7**

## TECHNICAL SERVICES

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The Technical Department is available to advise on individual projects and to prepare or assist in the preparation of specifications and drawings. We can also offer design guidance to satisfy the requirements of BS 8485:2015 and CIRIA C735.

A list of experienced applicators of our materials is available from RIW's offices, along with a list of independent consultants providing validation and integrity testing services.

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.

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