

# Sheetseal GR

RIW 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.

RIW Sheetseal Primer is a bitumen solution.

## BENEFITS

- Methane and carbon dioxide barrier
- Water and water vapour barrier
- Factory controlled thickness
- Elastic and flexible
- Damage easily repaired
- No drying time
- Selvege strip to improve lap sealing

## APPLICATIONS

- Suppression of methane and carbon dioxide

Waterproofing and vapour proofing of:

- Ground floors
- Basements and sub-structures
- Retaining walls

## APPLIED TO

- Concrete
- Masonry
- Timber

The logo for RIW, consisting of the letters 'RIW' in a bold, white, sans-serif font, centered within a dark blue oval with a white glow effect.

**Sheetseal GR**

## TYPICAL USES

RIW Sheetseal GR is typically used to reduce the passage of methane gas and carbon dioxide on, or in the vicinity of landfill sites. The membrane is also suitable for use on sites contaminated by town gas installations or where other harmful gases are present. In addition, RIW Sheetseal GR provides a water and water vapour barrier.

When designing Type A structure ( as classified in BS 8102 : 1990 ), the product applied correctly is capable of providing the levels of protection required for grades 1, 2, 3, & 4 basements.

RIW Sheetseal Primer is used on all vertical or inclined surfaces, to aid adhesion of the RIW Sheetseal GR membrane.

## DURABILITY

Subject to normal conditions of use RIW 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.

## SPECIFICATION

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

Please consult RIW Limited for further information.

## INDEPENDENT AUTHORITY

RIW Sheetseal GR has been tested by Wimpey Laboratories for methane gas resistance. The test results are included in the performance and composition table.

## ANCILLARY PRODUCTS

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

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

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

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

**RIW Protection Board** - a 3mm bitumen impregnated board to prevent damage to the membrane during backfilling operations.

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

## PERFORMANCE & COMPOSITION

| RIW SHEETSEAL GR                |   |
|---------------------------------|---|
| Form                            | Self adhesive sheet                                   |
| Backing material                | Cross orientated polyethylene with aluminium laminate |
| Overall thickness               | 1.60mm  |
| Applied thickness               | 1.50mm  |
| Roll size                       | 1050mm x 19.05m long rolls                            |
| Weight                          | 1.7kg / m <sup>2</sup>                                |
| Laps                            | 150mm   |
| Membrane strength               | ( ASTM D1000 ) 3.0N / mm <sup>2</sup>                 |
| Elongation                      | (ASTM D1000) 40 %                                     |
| Puncture resistance             | (ASTM E 154) 250N                                     |
| Adhesion – 180° peel            | (ASTM D1000) 2.0N / mm <sup>2</sup>                   |
| Water vapour transmission       | (ASTM E96) < 0.1g / m <sup>2</sup> / 24 hours         |
| Methane gas permeability        | < 0.3ml / m <sup>2</sup> / 24 hours                   |
| Minimum application temperature | 5°C   |

| RIW 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<br>Maximum : 7 days |

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

\*Figures quoted are theoretical coverage rates. Actual coverage may vary depending on nature of substrate.

## 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 : 1990, and BRE Report 212 : Construction of New buildings on gas contaminated land.

### 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 cement fillet (see ancillary products), approximately 20mm high to assist application, similarly, external corners should be chamfered or welded joints.

**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 RIW Cementfill FC or similar before the membrane is applied. Open textured surfaces should be sealed with RIW 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 RIW Sheetseal GR and RIW Sheetseal Primer should not be attempted in temperatures below 5°C. Apply one coat of RIW 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.

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

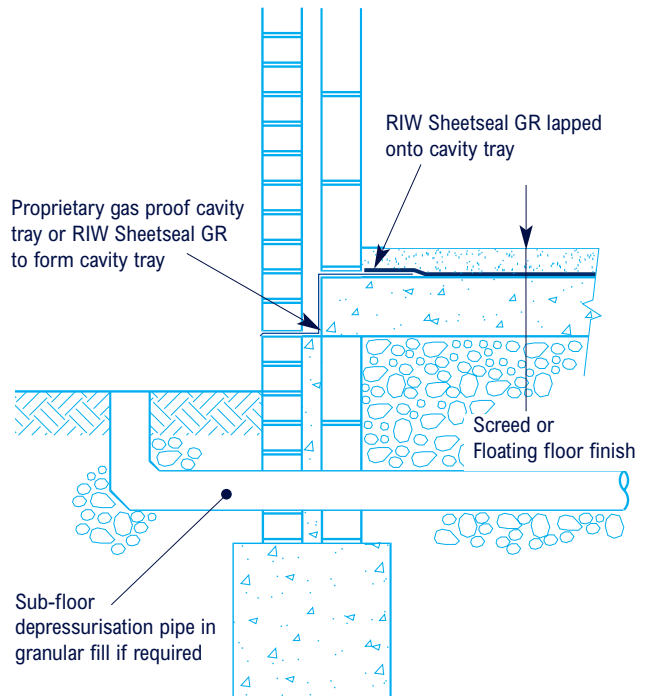
To apply the RIW Sheetseal GR, remove the separating paper progressively from one end of the roll, and press the adhesive coated surface firmly onto the prepared substrate. Smooth out the membrane working from the centre to the edges to remove air pockets. Any remaining bubbles should be slit with a 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. RIW 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 4 of this literature. The full membrane should then be applied.

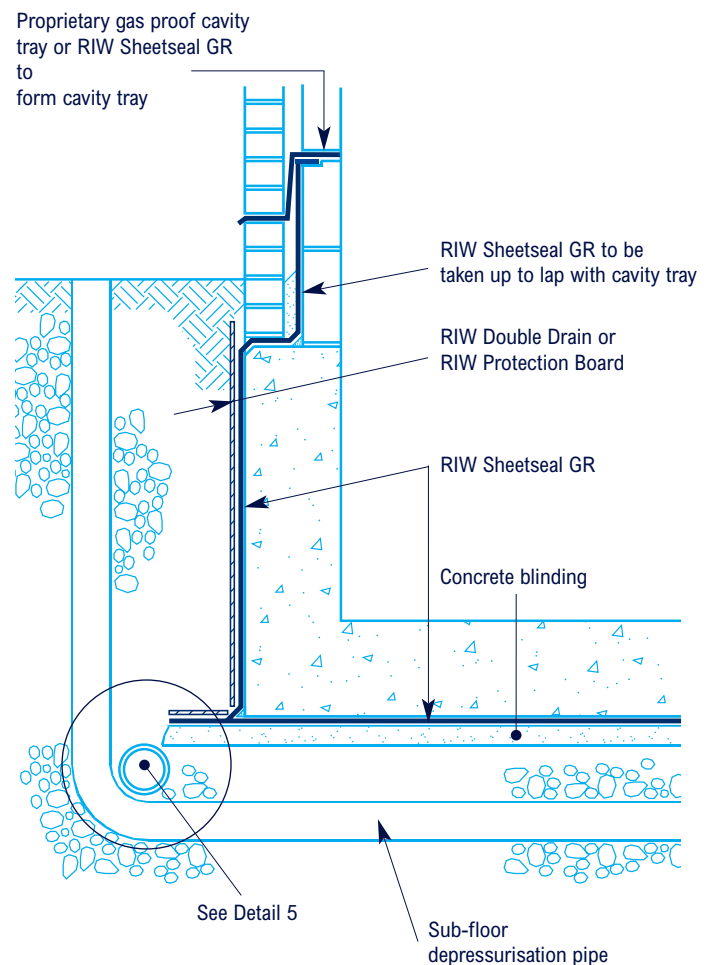
Internal angles and corners should be covered with a 300mm strip of RIW Sheetseal GR applied into the angle. The full membrane should then be dressed into the angle to form a triple layer as illustrated in Details 5 and 6 of this literature.

External angles should be covered with a 300mm strip of RIW Sheetseal GR. The full membrane is then applied ensuring that overlaps occur at the angle to give three layer protection as illustrated in Detail 7 of this literature.

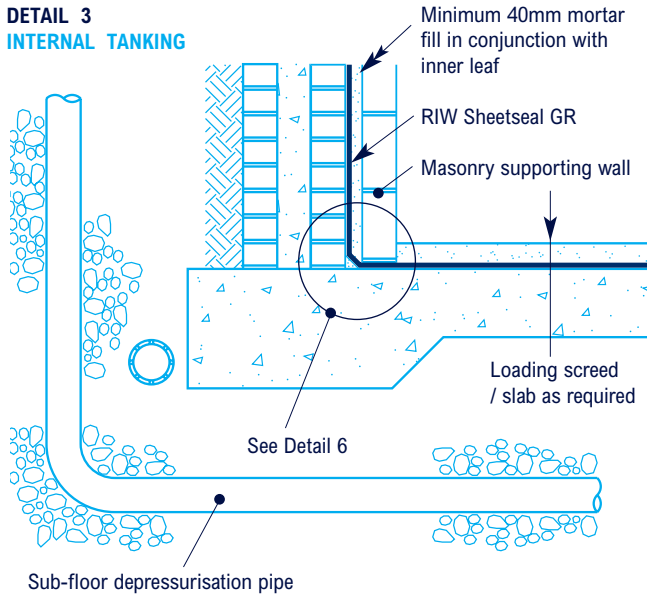
**DETAIL 1**  
**DPM TO GROUND FLOOR SLAB**



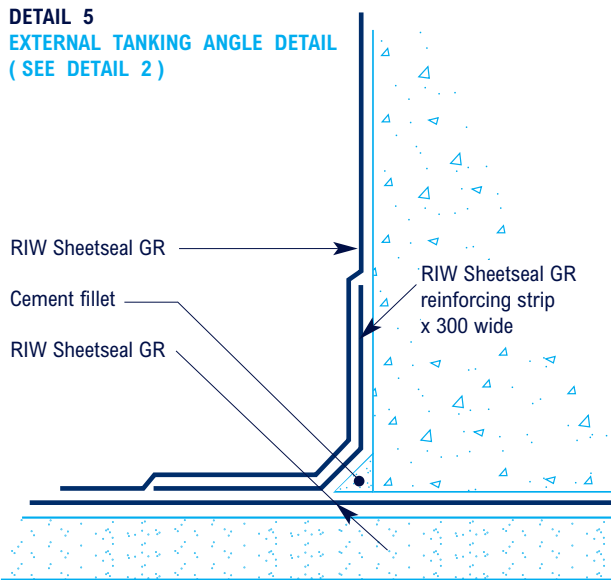
**DETAIL 2**  
**EXTERNAL TANKING TO STRUCTURAL CONCRETE**



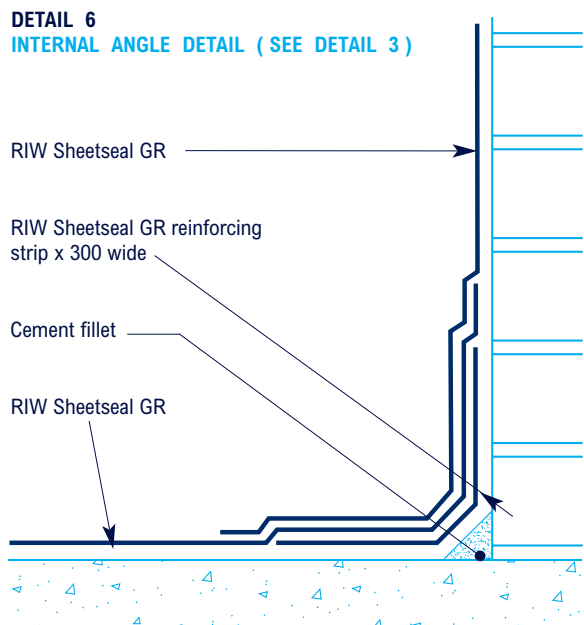
**DETAIL 3**  
**INTERNAL TANKING**



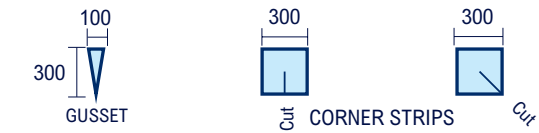
**DETAIL 5**  
**EXTERNAL TANKING ANGLE DETAIL (SEE DETAIL 2)**



**DETAIL 6**  
**INTERNAL ANGLE DETAIL (SEE DETAIL 3)**

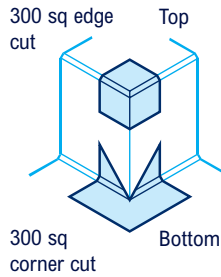


**DETAIL 4**  
**EXTERIOR CORNER DETAILS INTERIOR CORNER DETAILS**

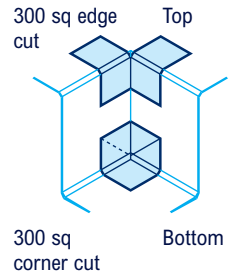


Note: Dimensions may vary slightly to suit concrete profile

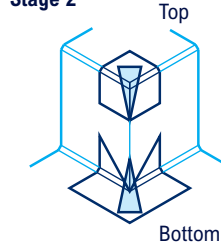
**Stage 1**



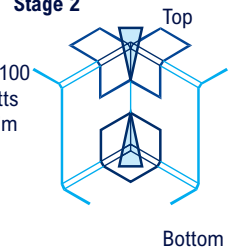
**Stage 1**



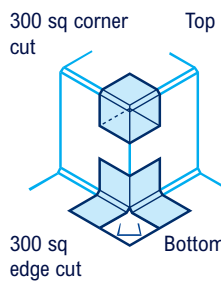
**Stage 2**



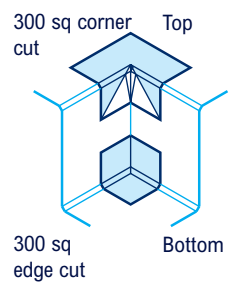
**Stage 2**



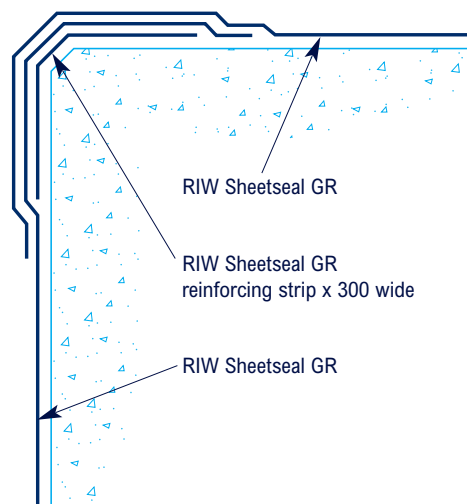
**Stage 3**



**Stage 3**



**DETAIL 7**  
**EXTERNAL ANGLE DETAIL**



## SPECIFIC USES

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

**External Tanking** : Should be carried out as illustrated in Detail 2 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. 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 5 of this literature. The remainder of the vertical membrane should then be applied and protected from backfill material using RIW Double Drain or RIW Protection Board to suit.

**Internal Tanking** : Should be carried out as illustrated in Detail 3 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** : RIW Sheetseal GR can be used to provide a methane barrier under a floating floor system at ground floor level. When used under insulation the following guidelines should be followed :

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

## SAFETY

RIW 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 Ltd's offices.

### PACKAGING

|                      |                            |
|----------------------|----------------------------|
| RIW Sheetseal GR     | 1050mm x 19.05m long rolls |
| RIW Sheetseal Primer | 5 and 25 litre containers  |

### STORAGE

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

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

## TECHNICAL SERVICES

The RIW 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 RIW material is available from RIW Ltd's office.



**RIW Limited**

Arc House, Terrace Road South, Binfield, Bracknell, Berkshire RG42 4PZ

Technical enquiries tel: **01344 397777**

Commercial enquiries tel: **01344 397788**

**www.riw.co.uk**

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 Limited. Conditions of use are beyond our control, therefore we can not warrant the results to be obtained.



**Sheetseal GR**