

# RIW STRUCTURESEAL GPT

Structureseal GPT is a 1.5mm thick, unique blended polyethylene membrane with a bonded geotextile for pre-applied waterproofing applications, where ground gas or VOC protection is also required.

## BENEFITS

- | Pre-applied tanking system
- | Hydrocarbon, VOC, methane & carbon dioxide barrier
- | Separate tanking or damp proof membrane not required
- | Robust jointing and sealing system
- | High puncture resistance
- | Welded joints possible
- | Compliant with BS 8485: 2015, BS8102:2009 & CIRIA C748

## APPLICATIONS

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

## APPLIED TO

- | Concrete
- | Formwork
- | Blinding Layer
- | Piling

# RIW STRUCTURESEAL GPT

## TYPICAL USES

Structureseal GPT is typically used as a pre-applied Type A tanking membrane (as defined in BS8102:2009), where protection against the ingress of hazardous ground gases or VOCs and Hydrocarbons is required.

Pre-applied to basement structures, floor slabs at ground level, boundary line applications and concrete formwork.

The installed product protects the structure against water, moisture, hydrocarbons, methane, carbon dioxide and radon from the ground and complies with BS8485:2015 and CIRIA C748.

## DURABILITY

Subject to normal conditions of use Structureseal GPT will remain effective against the ingress of water, water vapour and hydrocarbons, and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the building.

Where protection from hydrocarbons is required the laps in the product must be welded throughout.

## SPECIFICATION

J40 Flexible sheet waterproofing / damp proofing

Clause 140 Loose laid polyethylene gas retardant damp proofing.

Clause 145 Loose laid weldable polyethylene gas retardant damp proofing.

Please consult RIW for further information.

## INDEPENDENT AUTHORITY

CE Marked to BS EN 13967.

For Declaration of Performance see:

<http://www.riw.co.uk/technical-downloads/ce-marking>

## PERFORMANCE & COMPOSITION

Form	Loose laid sheet
Colour	Grey
Overall thickness	1.5mm
Roll size	1.9m wide x 25m long
Weight	33kg/roll
Adjacent laps (welded or taped)	100mm wide (onto selvedge)
End of roll laps:	
Under taped using Sheetseal GR	300mm
Welded	100mm
Tensile Strength EN 12311-1:	
MD	>550 N/50mm
CD	>400 N/50mm
Resistance to tearing EN 12310-1:	
MD	300N
CD	400N
Water vapour transmission rate BS EN 1931	0.14g/m <sup>2</sup> /day
Radon permeability SP Method 3873	3.0 x 10 <sup>-12</sup> m <sup>2</sup> . s
Methane gas permeability BS EN ISO 15105-1	0.13ml/m <sup>2</sup> /day/atm
Carbon dioxide permeability BS EN ISO 15105-1	3.01ml/m <sup>2</sup> /day/atm

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

## ANCILLARY PRODUCTS

RIW produce a range of ancillary products for use with Structureseal GPT which include:

**Structureseal GPT Corner Units** - preformed corner units, available for both internal and external corners.

**Structureseal GPT Corner Strips** - 1m wide rolls of Structureseal GPT, supplied with selvedge strips on both sides, and used at wall/floor junctions and wall/wall corners.

**Structureseal GPT Pipe Collars** - flexible collar for sealing around pipe penetrations.

**Gas Seal Tape HC** - 100mm wide self-adhesive butyl tape for sealing laps, onto selvedge strips, where product is not welded.

**Sheetseal GR** - 300mm wide self-adhesive sheet, used outside at ends of rolls, and to patch over bolt holes, etc.

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

## 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.

Wherever possible, services should enter the building above slab level to avoid penetrating the gas-resistant membrane. However, the water service and soil vent pipes will usually be required to enter the building through the slab and membrane.

### PREPARATION

The membrane should be laid on a smooth surface, free from voids, hollows and objects which may damage the membrane.

Floors: Substrate should be smooth and compacted and free of any sharp protrusions which may damage the membrane.

Walls: Structureseal GPT should line the inside face of the concrete formwork before concrete is cast.

Boundary Line Construction: against pile walls a smooth, flat surface should be provided by 'back-blinding' or spray concrete lining the piles before the membrane application.

### APPLICATION

The completed gas proofing system must cover the entire footprint of the building.

Starting in the corner, install pre-formed corner units, held in place using Gas Seal Tape HC. Followed by Structureseal GPT Corner Strips in right angle wall/floor junctions, taped or welded onto Corner Units. Laps at end of rolls are to be welded onto an adjacent selvedge by 100mm or butt jointed and taped underneath using a 300mm band of Sheetseal GR.

Structureseal GPT Corner Strips are then positioned vertically at internal and external corners. These strips are welded or taped onto the top selvedge strip of the wall/floor junction Corner Strip previously installed. Drawing numbers RIW/TD/854 & 855 are available for further guidance.

Starting again in the corner, Structureseal GPT should be unrolled onto the prepared surface with the geotextile surface facing towards the concrete to be waterproofed.

The product should be smoothed out as necessary, and be welded or taped onto the selvedge strip of the Corner Strips.

Subsequent rolls should then be lapped by welding or taping onto the 100mm wide selvedge strip of the adjacent roll. Laps at the end of the roll are to be welded or taped onto an adjacent selvedge by 100mm. When used horizontally, laps may be butt jointed and taped underneath using 300mm wide band of Sheetseal GR.

Pipe penetrations should be sealed using Structureseal GPT Pipe Collars, welded or taped to the underside of the main membrane.

Gas Seal GR DPC should be used to provide continuity through walls, with Structureseal GPT lapped and sealed onto it by welding or taping.

Bolt holes should be sealed with a suitable strength mortar, such as Cementfill HB, and patch repaired using a 300 x 300mm piece of Sheetseal GR.

### SPECIFIC USES

Structureseal GPT will achieve 2 points according to BS8485:2015 when independently validated.

Structureseal GPT should be installed with the ancillary products required, in accordance with current guidance for waterproofing & gas protection systems; including BRE211/414, CIRIA C665, CIRIA C748 BS8102:2009 & BS 8485:2015.

## SAFETY

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

### PACKAGING

Structureseal GPT	1.9m wide x 25m long rolls
Structureseal GPT Corner Units	Internal and External available
Structureseal GPT Corner Strips	1m wide x 25m long rolls
Gas Seal Tape HC	100mm wide x 15m long rolls
Structureseal GPT Pipe Collar	110mmØ 130mmØ 160mmØ

### STORAGE

The rolls must be stacked on a flat surface, kept under cover and protected from sunlight and mechanical damage.

## TECHNICAL SERVICES

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 BS8485:2015, BS8102:2009, CIRIA C748 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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