

RIW GAS SEAL HC

Gas Seal HC is a 1mm thick linear low-density polyethylene (LLDPE) smooth sheet.

BENEFITS

- l Hydrocarbon barrier
- l Manufactured from virgin material, not recycled waste
- l Separate damp proof membrane not required
- l Robust jointing and sealing system
- l High puncture resistance
- l Welded joints possible
- l Single wound membrane with zero creases
- l Complies with latest codes of practice as published by CIRIA and BRE.

APPLICATIONS

- l Combined ground floor damp proof membrane and hydrocarbon/gas barrier

APPLIED TO

- l Sand blinding
- l Suspended floors
- l Ground bearing slabs

RIW GAS SEAL HC

TYPICAL USES

Gas Seal HC is typically used as a linear low density, polyethylene gas barrier and damp proof membrane in concrete floors below the slab.

The installed product protects the structure against moisture, hydrocarbons, methane, carbon dioxide and radon from the ground.


DURABILITY

Subject to normal conditions of use Gas Seal HC 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.

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

	
RIW Limited Arc House, Terrace Road South, Binfield, Bracknell, Berkshire, RG42 4PZ, England 13 0799-CPR-256	
EN 13361, EN 13362, EN13491, EN 13492, EN15382: 2013 High performance loose laid hydrocarbon barrier.	
Max. tensile strength MD/CMD	30/30 N/mm ²
Puncture resistance	3,0 kN
Water permeability (permeability to liquids)	1,5 E-06 m ³ /(m ² .d)
Gas permeability (Gas tightness) Resistance	1,5 E-06 m ³ /(m ² .d)
Resistance to weathering	Residual values > 75%
Resistance to oxidation	Residual values > 75%

PERFORMANCE & COMPOSITION

Form	Loose laid sheet
Colour	Black
Overall thickness	1mm
Roll size	2.5m wide x 40m long
Weight	93.9 kg/roll
Laps	150mm or welded
Tensile Properties ASTM D 6693 Type IV	
- break strength	32kN/m
- break elongation	800%
Tear resistance - ASTM D 1004	130N
Puncture resistance - ASTM D 4833	400N
Radon permeability (m ² s ⁻¹ Pa ⁻¹)	
	8.0 x 10 ⁻¹²
Methane gas permeability (m ² s ⁻¹ Pa ⁻¹)	
	5.65 x 10 ⁻¹⁸
Carbon dioxide permeability (m ² s ⁻¹ Pa ⁻¹)	
	3.11 x 10 ⁻¹⁷

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 Gas Seal HC which include:

Gas Seal Tape HC - self-adhesive butyl tape for sealing between overlaps in the membrane.

Lap Tape RB - reinforced single-sided self-adhesive bitumen tape for sealing edges of lapped product.

Preformed pipe collars - flexible collar for sealing around pipe penetrations.

Sheetseal GR - self-adhesive sheet membrane for gas resistant waterproofing applications.

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

Geo-vent - cusped HDPE venting geo-composite incorporating geotextile to one side.

Geo-vent T connector - end connector incorporating 25mm slot for Geo-vent.

Peri-vent sets - periscopic vent complete with airbrick and Geo-vent adaptor.

Pro-fleece - textile fleece for protection of applied gas membranes.

Gas cloaks - standard or bespoke cloak units to facilitate membrane application.

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. If used below a ground bearing slab, the product may be laid on a sand blinding.

APPLICATION

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

Gas Seal HC should be unrolled onto the prepared surface, and be smoothed out if necessary.

Subsequent rolls should then be lapped onto the previous roll by 150mm, and be sealed using Gas Seal Tape HC placed centrally in the lap. Lap Tape should then be laid over the edge of the upper sheet, by 50mm, and be adhered down onto the lower sheet.

Alternatively, the product should be welded to provide a continuous sheet barrier.

Pipe penetrations should be sealed using Preformed Pipe Collars; sealed to the membrane, and pipe using Gas Seal Tape HC and Lap Tape RB; see Pipe Penetration Detail.

Gas Seal GR DPC should be used to provide continuity through the walls, with Gas Seal HC lapped and sealed onto it using Gas Seal Tape and Lap Tape as before.

Damaged areas should be patch repaired as necessary, using similar lapping / sealing details.

Gas Seal HC will achieve 2 points according to BS8485 when installed by qualified specialists and independently validated.

COMPATIBILITY TABLE

	BRE 211 Radon	CIRIA 665 Characteristic Situation 2	BS8485 Characteristic Situation 2	CIRIA 665 Characteristic Situation 3-6	BS8485 Characteristic Situation 3-6	NHBC Amber 1	NHBC Amber 2 & Red
Radon	YES	n/a	n/a	n/a	n/a	n/a	n/a
Carbon Dioxide	n/a	YES	YES	YES	YES	YES	YES
Methane	n/a	YES	YES	YES	YES	YES	YES
Hydrocarbon Vapour	n/a	YES	YES	YES	YES	YES	YES
Hydrocarbon Substances	n/a	YES	YES	YES	YES	YES	YES

SPECIFIC USES

Gas Seal Black should be installed with the ancillary products required, in accordance with current guidance for gas protection systems; including BRE211 / 414, CIRIA C665 & BS 8485.

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

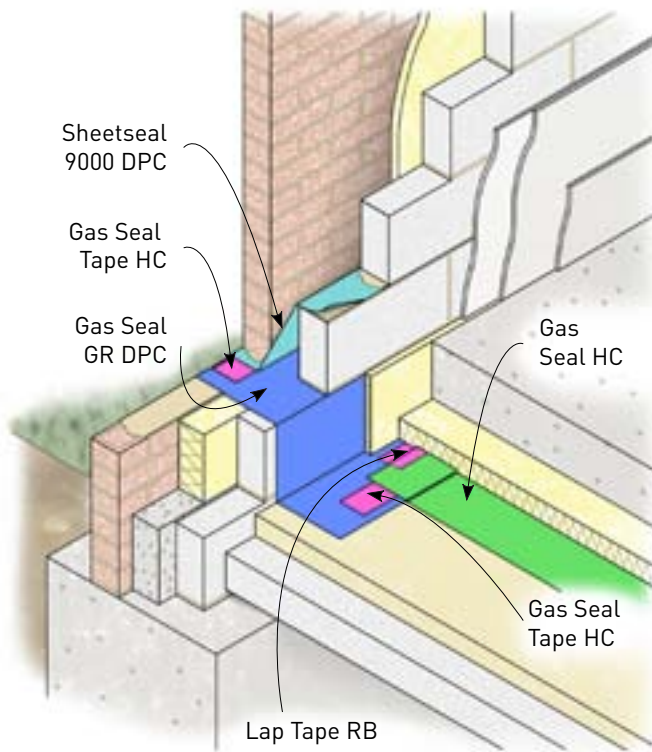
Gas Seal HC	2.5m wide x 40m long rolls (large rolls available on request)
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STORAGE

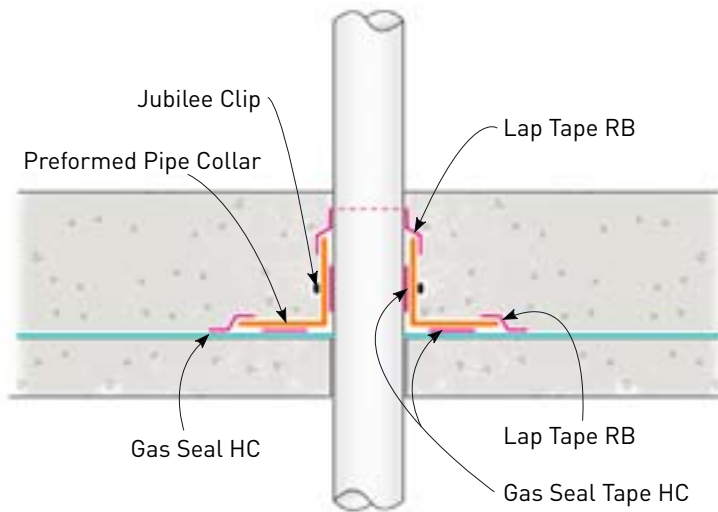
The rolls must be stacked on a flat surface, kept under cover and protected from sunlight and mechanical damage.

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



Typical Ground Bearing Slab



Pipe Penetration Detail

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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