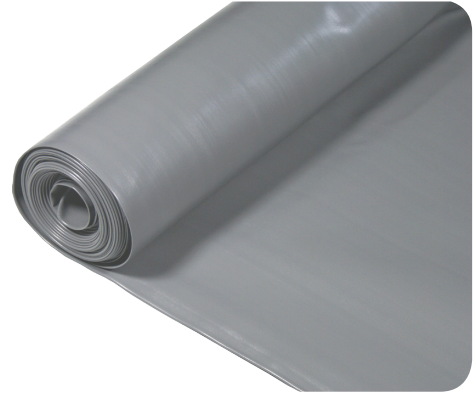


Rhinoplast Amber 2000 Gas Barrier

Data Sheet

Description

Rhinoplast Amber 2000 Gas Barrier is a low permeability, highly robust monolithic thermoplastic LDPE membrane for use as a Radon, CO₂ and low level Methane barrier. The barrier provides a safe solution for use in the construction of buildings and dwellings when installed according to the relevant code of practice. The product is coloured grey and is centre folded to minimise creasing under screeds and for ease of handling on site. The product has excellent strength and puncture resistance. Primarily designed to meet the requirements of NHBC characteristic Amber 1 (gas contaminated land) Roll size 4 x 12.5 metres.



Application

Rhinoplast Amber 2000 offers a complete solution for the protection of buildings and occupiers from Radon, Carbon Dioxide and low levels of Methane, including gas found on disused coalfield sites. Other sites such as disused landfill and industrially contaminated land will commonly require the protection of a gas barrier to protect buildings from gas ingress. Additionally, the membrane will also provide an effective damp proof membrane for the dwelling but is not intended to guard against situations where hydrostatic pressure is present.



Compliance

Rhinoplast Amber 2000 fully complies with the recommendations of the Building Research Establishment Document: 414 and with reference to the requirements of the NHBC Guidance on Methane and Carbon Dioxide report edition no: 4.

Site Handling and Storage

The rolls should not be exposed to extended periods of UV light and weathering which may cause it to become brittle. The product will remain unaffected following installation provided it is fitted in accordance with the relevant codes of practice. Keep in the protective outer wrapper until required for use.



Useful references

The Building Regulations Approved Document Part C 2004, CP 102: 1973 code of practise for the protection of buildings against water from the ground.

BR211 "Radon- Guidance on protective measures for new buildings"

BRE414 "Protective measures for housing on gas-contaminated land"

CIRIA C735 2014

BS8485: 2015 Code of Practise for the Characterization and Remediation from Ground Gas in Affected Developments

NHBC "Guidance on methane and carbon dioxide" and technical extra April 2016, issue 20



Installation

Quality control measures during the laying and installation process are critical to the performance of the product. Rhinoplast Amber 2000 is resistant to puncturing and tearing but where damage occurs this must be repaired by covering with a second layer of membrane sealed to the original using Girth Tape. Installation of Rhinoplast Amber 2000 must be in accordance with the recommendations of the Building Research Establishment Document: 414 and with reference to the requirements of the NHBC Guidance on Methane and Carbon Dioxide report edition no: 4. Additional guidance on the use of damp proof membrane materials is given in the Building Regulations 2000 requirement C4 (Resistance to weather and Ground Moisture) and regulation 7. (Materials and Workmanship). A surface blinding of soft sand (50mm min thickness) should be used to prevent puncture of the membrane during installation. A further protection over the membrane is afforded by using high density insulation (25kg/m³). Sheets must be clean and free from dirt and grease before application, and in view of the difficulty of achieving gas tight seals under wet or dirty site conditions it is recommended that special care is taken with this aspect of the installation. Where service ducts or pipes penetrate the membrane, gas tight joints are affected using sealant tape and top hat units with retention clips. Pipes, steel stanchions and concrete columns can be sealed using the approved adhesive gas resisting membrane with an overlap of 150mm on each surface and rolled firmly. Steel, concrete and masonry surfaces should be primed in accordance with the primer manufacturer's instructions prior to the adhesive membrane being laid.

The membrane must be covered by a screed, high density insulation or other protective layer as soon as possible after installation. Care should be taken to ensure that the membrane is not stretched or displaced when placing the concrete or other protective layer over it. Great care should be taken to avoid bridging (i.e. creating areas of unsupported membrane) during screeding operations, for example at internal angles.

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| RHINOPLAST TOP HAT UNITS | - For sealing protrusions such a service pipes. |
| 50mm x 15m RHINOPLAST JOINTSTRIP LT | - Used as a gas sealing joint tape for laps. |
| 72mm x 50m GIRTH TAPE | - For sealing laps prior to screeds being poured. |

Technical Data

Method	Test Unit	Mean Results	
	Roll Size	4m x 12.5m	
	Thickness	500mu	
	Density (kgm-3)	920	
	Colour	GREY	
MOAT 27 5.1 BS 2782 (360B)	Tear Strength- Nail tear (N)	Longitudinal 215	Transverse 185
BE 2782 (320) (12)	Elongation at break (%)	500	525
MOAT 27 5.1.6.1	Dimensional Stability (%) (4) at 80°C 72 hours)	+0.17	0.37
MOAT 27 5.4.2	Low temperature flexibility (5) 20mm dia mandrel (-27°C)	No cracking	No cracking
WVTR (gm-2day-1)	Resistance to water vapour	0.24	

*Tested on 375mu material

Radon Permeability	4 x 10 ⁻¹² m ² /s
CO ₂ Transmittance	26.53cc/m ² hr
Methane Transmittance	6.43cc/m ² /hr
MVTR	0.16g/m ² /day



Ancillary Components

Rhinoplast Joint Strip

A butyl modified double sided bitumen tape, 1.5mm thick, designed to form a gas tight gasket. Excellent adhesion and tolerance to damp conditions.

Colour: black.

Available in: 50mm x 15m rolls,
100mm x 15m rolls



Girth Tape

A single sided girth tape used to secure and protect linear joints. Excellent adhesion, dimensionally stable and water resistant.

Colour: black.

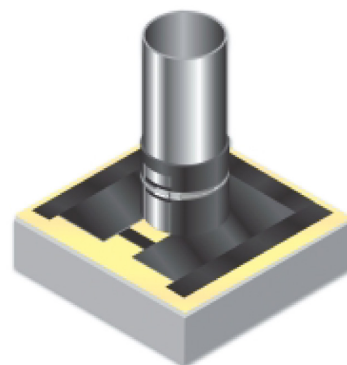
Available in: 72mm x 50m rolls.



Top Hats

A pre-formed pipe seal complete with stainless steel jubilee clip. Easily fixed and sealed on site.

Size range from 50mm to 200mm.



Radon Sump Units

The Radoncare Sump and Cavity Gas Vent System is manufactured by a rotational moulding process from heavy duty polyethylene. The sump is constructed with a solid roof and base and is provided with 40mm diameter holes in the walls. Spigots for 100mm pipe connections are provided at each end of the sump, but are blanked off with knock outs to allow choice of direction for extract pipe. The cavity gas vent comes with a detachable polyethylene cap, which can be easily removed if an extraction system has to be attached.



Useful References

The Building Regulations Approved Document Part C 2004, CP 102: 1973 code of practice for the protection of buildings against water from the ground.

BR211 "Radon - Guidance on protective measures for new buildings"

BRE414 "Protective measures for housing on gas-contaminated land"

CIRA C735 2014 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases.

BS8485: 2015 Code of Practice for the Characterization and Remediation from Ground Gas in Affected Developments

NHBC "Guidance on methane and carbon dioxide" and technical extra April 2016, issue 20.

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