



cordek

▶ INNOVATIVE PRODUCTS FOR CONSTRUCTION



GAS PROTECTION

THE CORDEK SOLUTION

VENTFORM • MEMBRANES • ANCILLARIES

The Cordek Gas Protection System

Ventform

- ▶ **More and more housing and commercial developments are being built on brownfield sites where toxic and hazardous gases such as methane, radon, carbon dioxide and carbon monoxide are present.**

The Cordek Gas Protection System has been developed to facilitate the dilution and dispersal of these gases from beneath buildings. Used extensively throughout the UK and Eire, it comprises:

- Ventform panels moulded from high density expanded polystyrene (EPS)
- The high quality Powerbase® range of gas membranes
- Ancillaries such as telescopic vents, airbricks, top hats and tape



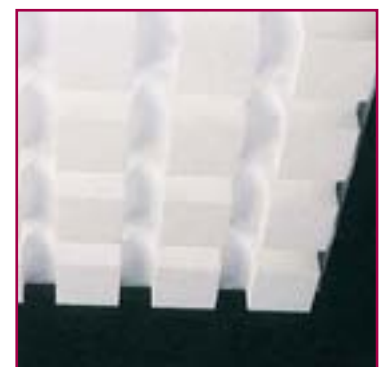
- ▶ **Ventform panels are moulded in a variety of depths to deal with different levels of gas emission. The EPS density also varies to provide a range of load bearing characteristics. All panels are flame retardant and are CFC and HCFC free.**

There are two distinct types of Ventform panel, pictured below.

Grades and Performance Characteristics

Ventform Grade	Overall Depth (mm)	Leg Depth (mm)	Clear Void Equivalent (mm)	Maximum Load Capacity (kN/m ²)
80/20	80	40	22	20
80/30	80	40	22	30
80/40	80	40	22	40
80/50	80	40	22	50
100/20	100	60	33	20
100/30	100	60	33	30
100/40	100	60	33	40
100/50	100	60	33	50
150/9	150	80	60	9
150/13	150	80	60	13
200/9	200	130	100	9
200/13	200	130	100	13

Panel size: 1.2m x 1.2m



Ventform 80 & 100



Ventform 150 & 200

► The Cordek support services

Site specific design, on receipt of gas concentration and emission data.

A professional installation team.

Full technical and site support.

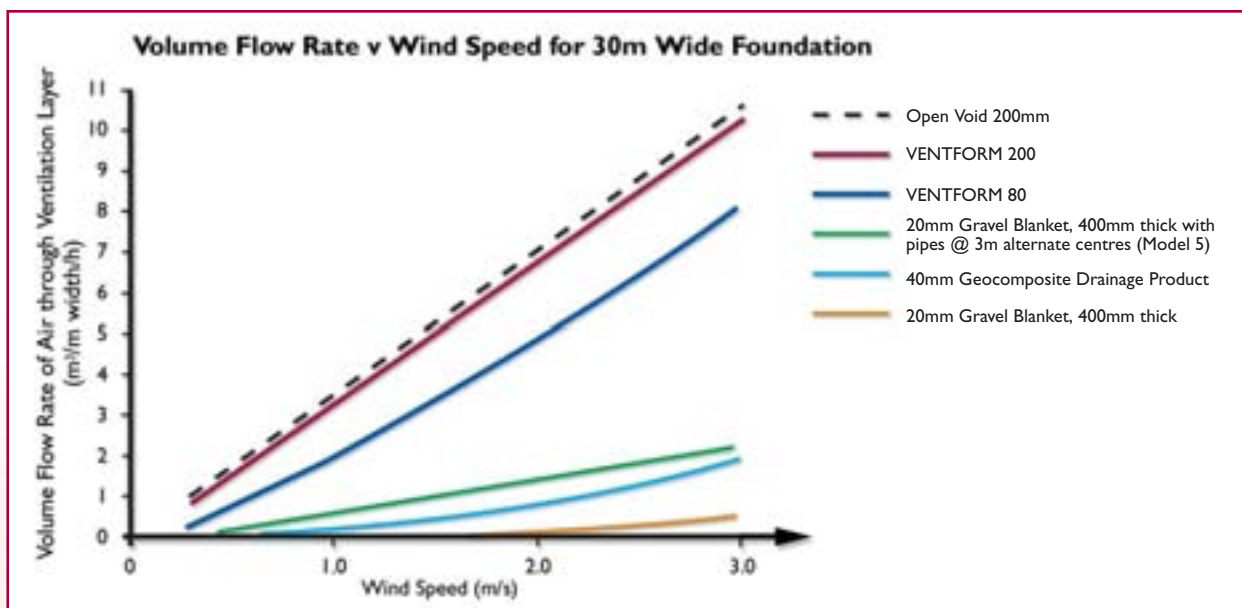
► Backed by independent research

Detailed studies have been conducted by Arup Environmental and Kingston University, comparing Ventform and other alternatives.

The graph below is based on CFD modelling undertaken by Arup Environmental in partnership with the DOE. It highlights the outstanding performance of Ventform.



Result of CFD Modelling



Ventform Benefits

- Certified by the BRE
- NHBC approved
- Offers a high level of insulation
- Provides an ideal surface on which to lay the Powerbase gas membranes
- Quick and simple to position and lay
- Compatible with all types of perimeter vent
- Moulded to a consistently high quality
- Manufactured to ISO 9002



- ▶ As has been stated Ventform provides a high degree of insulation. The expanded polystyrene used in Ventform has a minimum thermal conductivity of 0.036 W/mK.

Ventform Grade	Thermal Resistance (m ² K/W)
80/20	1.60
80/30	1.65
80/40	1.69
80/50	1.75
100/20	1.84
100/30	1.90
100/40	1.95
100/50	2.01
150/9	2.37
150/13	2.43
200/9	2.63
200/13	2.70

Ventform is compatible with all types of perimeter vents. Preferred options are air bricks and low level pipes with periscope risers (see Ancillaries).

The size and spacing of vents depends on the concentration and emission rates of the gas. As a guide, air bricks at 2m centres on all faces of the building will be suitable for most sites. If in doubt please contact our technical services department.



The Complete Gas Protection System

Gas Membranes

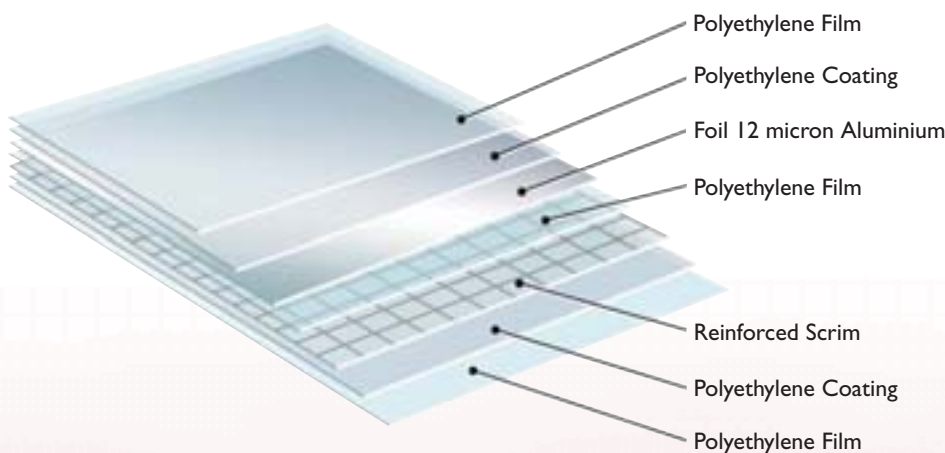
► **The Powerbase® high quality membranes are an integral part of the Cordek Gas Protection System.**

The MB 420 membrane incorporates a layer of aluminium foil and provides a very effective barrier to methane, carbon monoxide and carbon dioxide. (BRE Certificate No. 095/02)

- Acts as a DPM
- Joints can be securely sealed using Powerbase® certified bitumen tape
- A professional installation service is available
- It is the only certified weldable membrane



The use of Ventform with its sympathetic surfaces enables the Powerbase membranes to be laid with the minimum of damage.



The layer of aluminium foil is encapsulated by other layers of film, coating and reinforcement. Independent test data is available for the MB 420 membrane.

Standard Roll Size - MB 420 membrane

Roll Width – 1.6 metres

Roll Length – 50 metres

Roll Weight – 32 kilograms

NOTE:

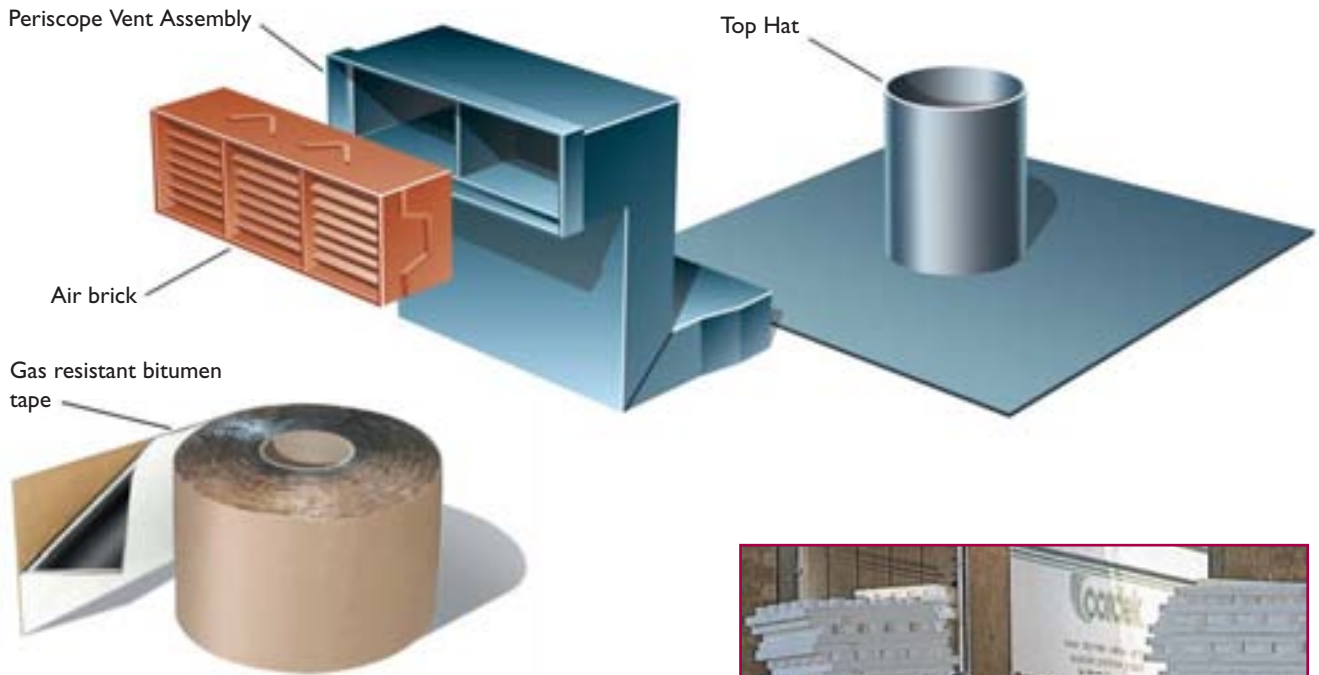
If radon gas is present then Powerbase® RB 340 is recommended. (BRE Certificate No. 100/03)



The Complete Gas Protection System

Ancillaries

- ▶ A wide range of fittings are available directly from Cordek to meet the needs of most applications.



Storage and Handling

Ventform panels are delivered in packs up to 20kg in weight. Easy to handle, the maximum individual panel weight is 4.5kg.

All panels are flame retardant and will not deteriorate if exposed to sunlight or rain. They should be stored in a clean level area and secured against high winds.

Installation

The formation layer should be suitable for the particular application. In ground bearing situations the sub grade should be designed to accept the dead and live load concentration under the Ventform legs.

The lightweight but durable panels can be easily laid by one person. They can be quickly and simply cut using a fine toothed saw or a hot wire cutter - available from Cordek.

The use of pre-fabricated EPS pile collars speeds up installation and reduces waste.

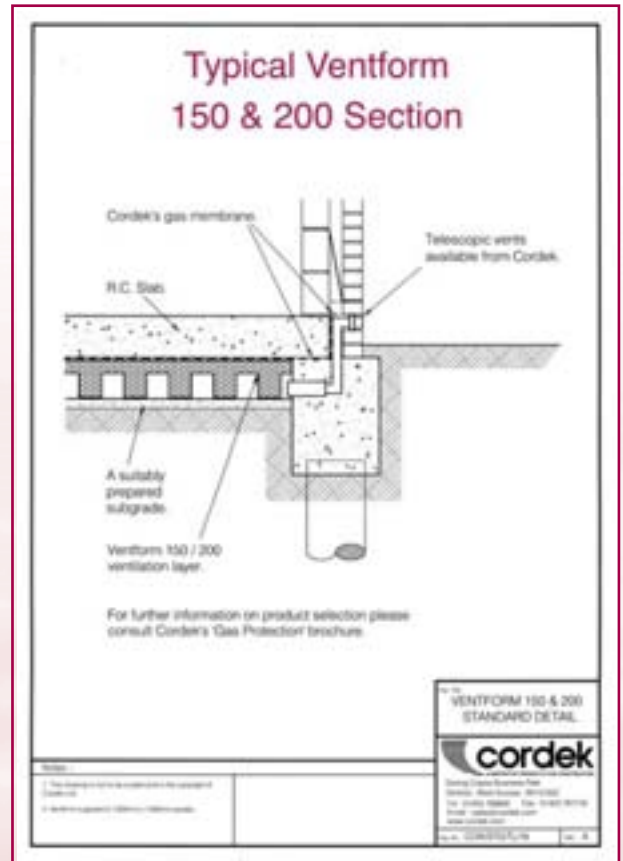
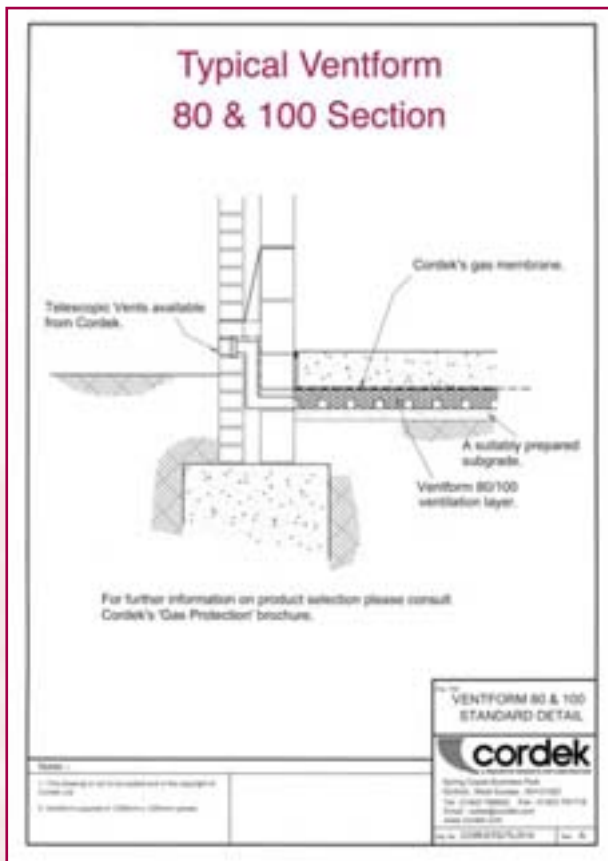
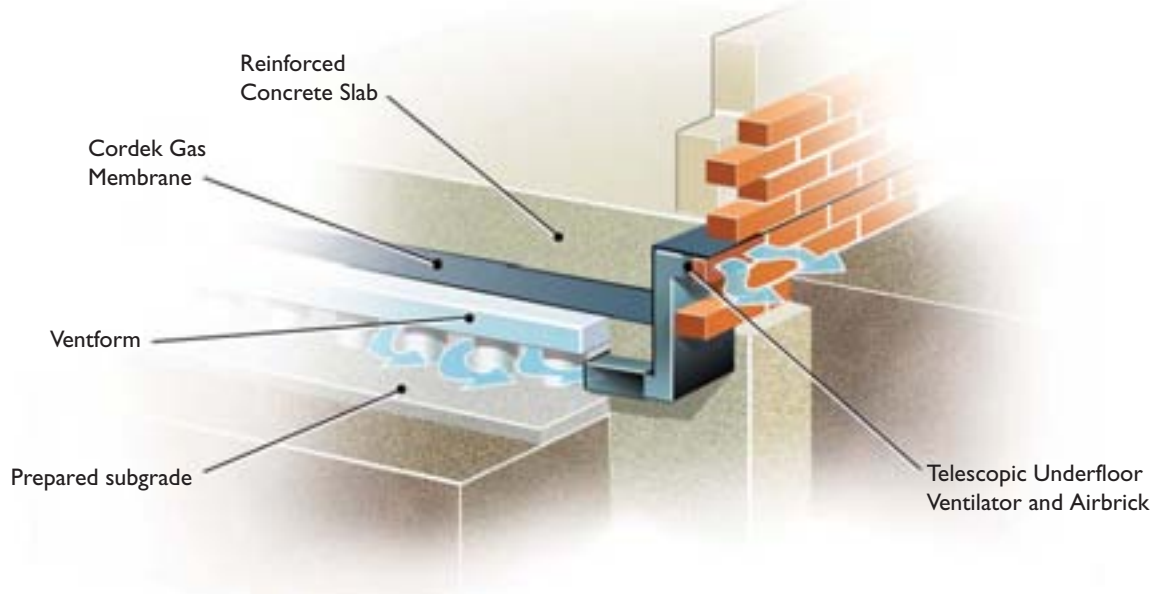


Standard Details

► System Design

Detailed and high quality research independently backed by many years experience enables us to provide reliable design advice.

On receipt of site investigation data, including bore hole flow rates and gas concentrations, we can make site specific recommendations.



A full range of Standard Details are available on our website: www.cordek.com

For our detailed literature on these other Cordek Solutions,
please call our technical sales on: **+44 (0) 1403 799601**

Creative Solutions

For a range of design led applications

Trough & Waffle Moulds

For forming ribbed concrete floors

Cellcore

For protecting foundations against ground movement

Claymaster

Low density polystyrene for accommodating lateral ground movement

Cellform

Like Groundform but with built-in protection against ground movement

Groundform

A formwork system for in-situ ground beams and pile caps

Correx® & Seekure

For temporary protection

Tipform

A system for constructing steep sided landfill sites

Piling Accessories

A range of product solutions and systems

Cordek Bentonite WM

For below ground waterproofing applications

Filcor EPS

For voidforming, landscaping and fill applications



If the contents of this brochure do not point to a solution for a gas protection application, we urge contractors and specifiers to call our Technical Sales line on 01403 799601.

Our reputation is built on innovation and we have a wealth of problem solving experience for you to call on.

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