Alderprufe CO_2 and RadonGas Membrane

- High quality robust Polyethylene based Membrane
- High resistance to puncture
- Low permeability to carbon dioxide
- Also acts as a damp proof membrane

Description

The Building Regulations require that proper precautions be taken to prevent danger to health and safety when building on contaminated land. Alderprufe CO_2 Gas membrane offers a safe solution for the protection of buildings against carbon dioxide, when installed in accordance with BRE Report: 414 “Construction of buildings on gas contaminated land”. Alderprufe CO_2 is a robust polyethylene-based membrane; for ease of identification on site the membrane is coloured green. The Barrier is flexible and is easy to install, and is also suitable to use as a damp proof membrane.

Application

Applications

Alderprufe CO_2 Gas membrane offers a safe solution for the protection of buildings and occupiers against carbon dioxide ingress. Typically these are sites previously used as coalfields, landfill or are contaminated industrial sites.

Storage and Handling

Alderprufe CO_2 Gas membrane is classified as non-hazardous when used in accordance with the relevant Code of Practice (CP 102 1973) The product is chemically inert and is not affected by acids and alkalis that may be present in the sub-soils. The material is not recommended for uses where it will be exposed to long periods of outdoor weathering. However weathering will not occur when the membrane is installed in accordance with CP 102 1973.

Care should be taken to avoid accidental damage when handling the membrane on site. When the weather is cold Gastite Double Sided Jointing Tape should be kept in a warm, dry place until needed. Installation is not recommended below 50ºC.

Useful references

The Building Regulations Approved Document Part C 1992 CP 102: 1973 Code of practice for the protection of buildings against water from the ground

BS 8102: 1990 Code of practice for the protection of structures against water from the ground

BS 8215: 1991 Code of practice for the design and installation of Damp Proof Course in Masonry construction.

BS 8000: Part 4: 1989 Workmanship on Building Sites. Code of practice for waterproofing

Building Research establishment BRE No 414 “Protective measures for housing on gas contaminated land”.

Additional Components

As part of the CO_2 protection system you may also require:

Aldercourse GRA Preformed Pipe Collar
Gastite Double Sided Joint Tape

Installation

Alderprufe CO_2 Gas membrane and ancillary components must be installed in accordance with the recommendations of Building Research Establishment BRE No: 414 “Protective measures for housing on gas contaminated land”.

The product is not intended for use where there is the risk of hydrostatic pressure. The membrane should be installed on a blinded or smooth surface allowing adequate overlap for jointing between the sheets and avoiding bridging (i.e. areas of unsupported membrane). To avoid slip or shear planes it is not recommended to take the membrane through the wall. In order to provide a continuous barrier across the cavity Aldercourse GRA dpc should be sealed to the membrane, taken through the blockwork, up the wall and incorporated below the damp proof course on the outer leaf.

Ventilation

An open void beneath the ground floor should be constructed with cross ventilation through the external and internal walls. This will dilute and disperse soil gases. Open voids are normally restricted to beam and block floors or other precast concrete floor systems. An alternative for providing ventilation to in-situ concrete floor slabs is to install Geovoid Gas Ventilation – there is an option to suit all types of construction.

Jointing

Alderprufe CO_2 Gas membrane should be overlapped by at least 100mm and bonded with Gastite Double Sided Tape. Ensure that the membrane is clean and dry at the time of jointing. Perforations or punctures in the sheet should be covered with another part of the sheet and have an overlap of at least 150mm and the laps sealed with Gastite Double Sided Tape. Airtight seals should be formed around all service entry points. Preformed Top Hat Units are available for sealing around pipe entries.

Covering

Alderprufe CO_2 Gas membrane should be covered by a protective layer as soon as possible after installation. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying a screed or final floor covering.

When reinforced concrete is to be laid over the barrier the wire reinforcements must be prevented from contacting the barrier. It is recommended that the barrier is covered with screed or protection boards before positioning the reinforcement.

Alderburgh Ltd

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For further information contact our Sales Office on Tel. 01706 374416 or Fax.01706 376785

Alderprufe - CO_2 Gas Membrane

Typical Properties	
Technical Data	
Thickness	360mu
Width (m)	4
Length (m)	20
Colour	Green
Roll Weight	26.5 kg
Technical Performance	
WVTR BS 2782: Part B, method 820A (1992) 23±2ºC 75	0.56g / m^2 day
Tear Resistance (Trouser Tear) BS 2782:6 method 631A	
Unaged	MD: 60.8N CD: 54N
Aged	MD: 64.4N CD: 56.6N
Tensil Strength and Stretch BS 2782: 3 method 320A 1976 (1996)	
Strength	
Unaged	MD: 25.7N / mm^2 CD: 21.4N / mm^2
Aged	MD: 22.2N / mm^2 CD: 23.9N / mm^2
Elongation	
Unaged	MD: 1102% CD: 1067%
Aged	MD: 972% CD: 1133%
Tear Resistance (Nail Tear) MOAT 27 : 5.4.1	
Unaged	MD: 105N CD: 104N
Aged	MD: 106N CD: 107N
Dart Impact Strength (impact resistance in grams) ASTM	1100g
Low Temperature Flexibility MOAT 27: 1983 5.4.2	Pass
Density	0.92g / cm^3
Mass / unit area BS EN ISO 536 (1997)	280g / m^2
Gas ($C0_2$) permeability test in accordance with ISO 2782: 1995	

Permeability Value	1.18×10^{-16} m^2 / sec / Pa
Gas Trans. Rate	146 cc / m^2 / hr