

Ventilation Systems

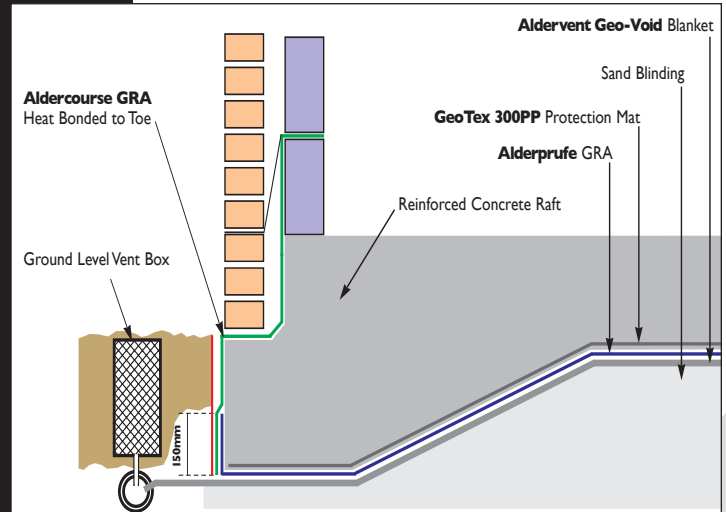
Aldervent Geo-Void 26/60

The purpose of any ventilation system below the structure is to prevent high concentrations of land borne gas Methane, Carbon Dioxide or Radon - accumulating, thus preventing a potential health and safety risk.

The main criteria for the Aldervent designed ventilation systems are:

To dilute the gas concentrations present with the through flow of air from the perimeters of the building.

To disperse any gas safely along pre-determined voids and channels to the outside atmosphere, where it will be safely diluted and dispersed into the atmosphere.



Description

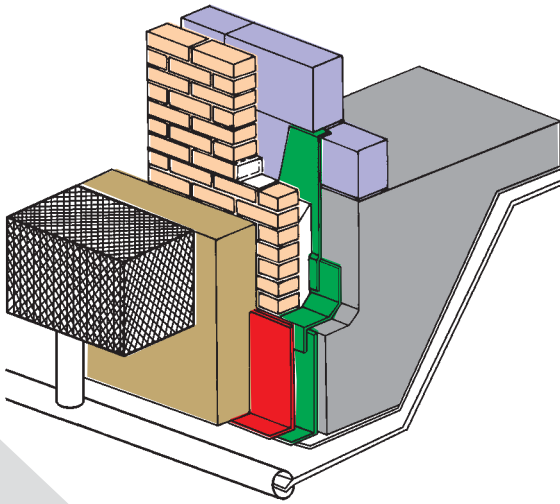
Aldervent Geo-void 26/60 is a preformed void forming sheet system, installed in one operation to either cover the whole of the building footprint as a blanket or laid in strip form at design determined centres. Installed on top of the granular sub-base below the structural slab.

Installed with the geo-textile filter membrane on the underside creating a 26mm clear void space for the dilution and dispersal of gases. With an intrinsic permeability of at least 1.2×10.5 , high pressure resistance being created by the studded pattern. The geo-textile filter layer allows gas to filter into the void but prevents clogging.

Aldervent Geo-grid 26 is connected into slotted gas collection ducts at opposing perimeters. The gas collection duct is then connected at pre-determined centres (dependent on the site investigation report and percentage target



Aldervent Geo-Void 26/60



equilibrium required for the structure) to a series of ventilation inlets and outlets.

Dependent on the design criteria and air flow rates required, these can be Aldervent through wall vent units, vent bollards, ground level vent boxes, vertical risers (see separate data sheets)

When installed as a blanket this provides a clear prepared surface for the direct installation of an Alderprufe proprietary Gas Barrier membrane. (see separate data sheets)

Specification

Aldervent Geo-void 26/60 gas dispersal mat is to be installed strictly as per manufacturers recommendations and in accordance with good building practice.

Aldervent Geo-void 26/60 has been CFD modelled in line with recommendations and tests undertaken for the DOE Partners in Technology report Passive Venting of Soil Gases Beneath Buildings Research Report Design Guide 1997.

All test results are available for engineers assessment and design calculation checks on request.

Where developments are considered on sites with extremely high gas emission figures, active upgrade and gas monitoring systems can be attached to the designed passive systems if required

Technical Data

Properties	Test Method	Unit	Value
FILTER FABRIC			
Tensile strength			
Strip bst 20cm	BS6096-1	kN/m	8.2
Elongation at max load		35%	45
At 5% elongation	BS6096	kN/m	3.35
Wide width 50cm	NF-G38-014	kN/m	8.8
Elongation at max.load		31%	43
Grab strength	DIN S 3858	N	565
Grab strength	ASTM 1682 mod 200mm	N	700
Elongation at max load	>60%	>60	
Puncture resistance ~CBR)			
Max. load	BS6°wn6/4	N	1270
Displacement	mm	50	
Burst strength	AsTM D-3786	kN/m ²	1350
Trapeziodial Tear Strength	ASTM D-1117	N	370
Core			
Nominal Thickness	26mm		
Material	HDPE		
Crush / res @ 10% deflwti mean @ yield	ASTM D 1621 - 73	kN/m	400 (min)
Creep resistance	200 KPA for 100 hrs	%	5 (max)
Forchelmer Term	DoE approved method	s/m	<24.0

Ventilation Systems