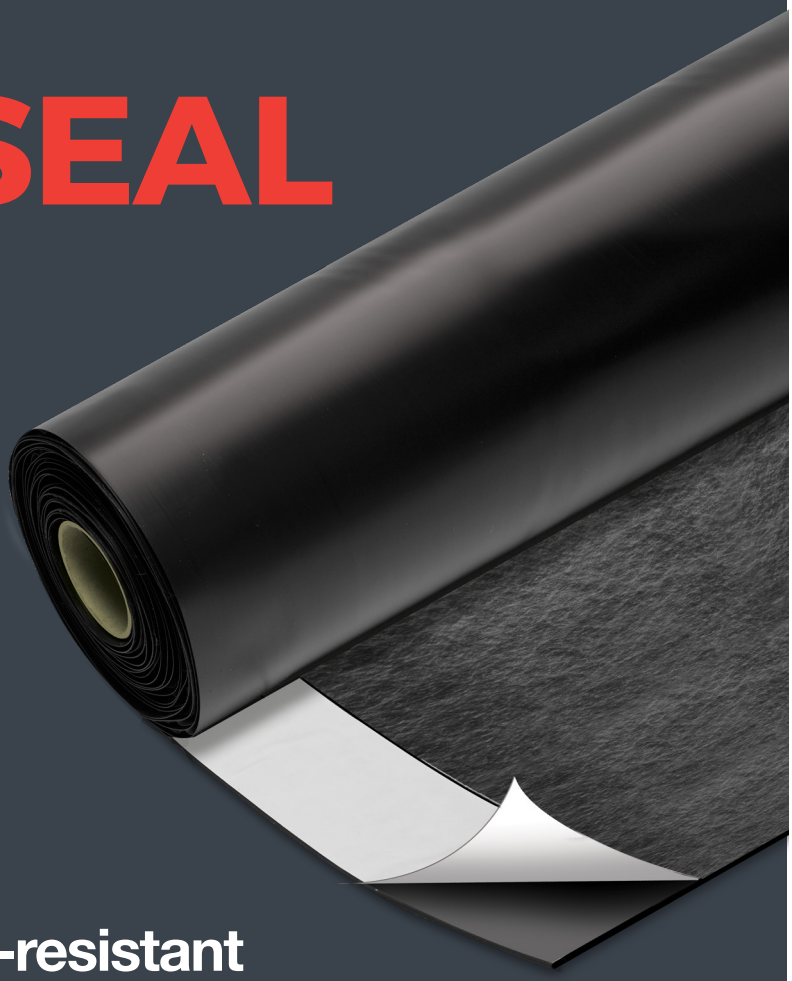
TECHNICAL DATA SHEET

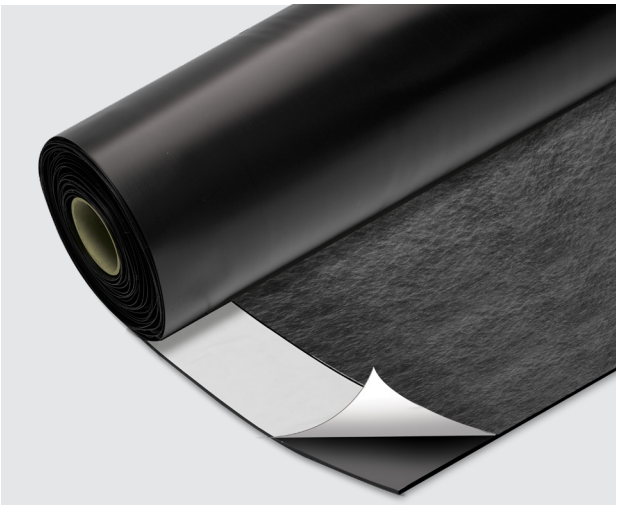
COMBISEAL HD

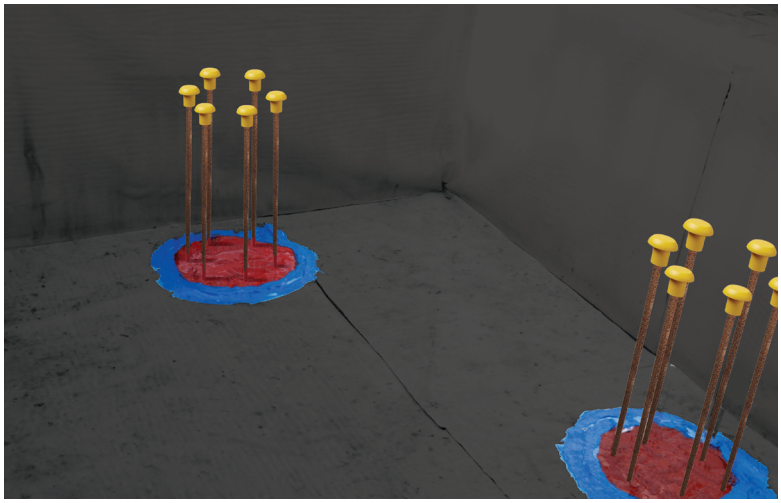


Combined gas & VOC-resistant waterproof membrane

PREMCRETE

COMBISEAL HD





TYPE A
PRE APPLIED

WATER RESISTANT

GAS RESISTANT

RADON RESISTANT

VOC RESISTANT

BDA CERTIFIED

UK CONFORMITY

25 YEARS
PRODUCT WARRANTY

DESCRIPTION

COMBISEAL HD is a Heavy Duty Gas and VOC-Resistant Waterproof pre-applied membrane, designed for horizontal below slab applications and vertical substrates. When applied to piled wall surfaces a suitable proprietary regulating layer must first be applied (such as spray-applied concrete or structural spray-foam technology).
For direct applications to piled wall substrates Combiseal Plus should be used. This Type A membrane, comprises of a high-density polyethylene membrane (HDPE) bonded to a cross laminated non-woven geotextile (black fleece). This fleece ensures a fully bonded connection to the concrete once poured.

USES

COMBISEAL HD is a pre-applied waterproof membrane for basement construction, designed for horizontal application in basement construction, lift pits and other structures which extend below ground.

COMBISEAL HD achieves two Gas Protection Score Points when correctly installed in accordance with table 7 of BS 8485:2015+A1:2019.

ADVANTAGES

- Factory-applied selvage butyl tape for ease of installation
- Available as weld-grade if required
- No reliance on fixings into substrate when applied to horizontal substrates
- Enhances slip resistance in wet weather during installation
- High puncture resistance.

COMBISEAL HD

TECHNICAL & PERFORMANCE PROPERTIES

Property	Test Method		Value
Mass	EN 1849-2		1.47 kg/m²
Thickness	EN 1849-2		3.1mm
Straightness	EN 1848-2		Pass
Tensile (MD)	EN 12311-2	Method B	18 N/mm²
Tensile (CD)	EN 12311-2	Method B	33 N/mm²
Elongation at Break (MD)	EN 12311-2	Method B	667%
Elongation at Break (CD)	EN 12311-2	Method B	394%
Watertightness	EN 1928	Method A	Pass
Shear Resistance at Joint	EN 12317-2		174 N / 50mm
Water Vapour Transmission	EN 1931		1.92×10^-8 kg/m²·s
Visible Defects	EN 1850-2		No visible defects
Impact Resistance	EN 12691	Method A	Pass
Nail Tear Resistance	EN 12310-1		1230 N
Static Loading	EN 12730	Method A	20kg
Reaction to Fire	EN 13501-1		Class E
Methane Permeability	ISO 15105-1		5ml/m²/24 hour
Carbon Dioxide Permeability	ISO 15105-1		19ml/m²/24 hour

Further independent test certificates are available upon request relating to VOC resistance.

INSTALLATION PROCEDURE

Surface Preparation

Horizontal substrates should be blinded with lean-mix concrete or prepared with well compacted hardcore and must be free from excessive undulation or sharp projections which may puncture the membrane.
Irregularities within concrete substrates should be repaired with a suitable PREMCRETE repair mortar.
If the membrane is to be installed vertically to a piled wall substrate, then a consistent profile surface must be achieved across the vertical face. This can be achieved via spray-applied concrete, cast back-blinding or structural spray-foam technology. The membrane should be installed against a continuous, compacted and consistent surface to ensure it is fully supported and effectively sandwiched between the 'faced-up' piled wall and the concrete poured in front of it.

Application to horizontal surfaces

COMBISEAL HD, typically pre-applied beneath horizontal concrete slabs, should be laid with the black fleece facing upwards, ensuring direct contact with the concrete when poured.
Adjoining sheets should be lapped by a minimum of 150mm and sealed using COMBISEAL TAPE or by making use of the pre-applied tape on the membrane. It is recommended to stagger the lap joints by 300mm to avoid 4 sheets lapping at one location. Typically, reinforcement spacer blocks should be placed along the length of the lap joint to ensure that the membrane is effectively loaded to prevent displacement during placement of the concrete. Where required, the membrane can be fixed mechanically (not mandatory) through the selvedge tape or other taped zones, using PREMCRETE METAL WASHER FIXINGS at 500mm centres.
Service penetrations and pipes should either be sealed using a HYDROPRUFE TOPHAT which is sealed to the underside of the COMBISEAL HD using HCR BUTYL TAPE or with TWINSEAL COMPOUND GR applied around the circumference of the penetration, with the COMBISEAL HD tightly cut to the anulus of the penetration. TWINSEAL COMPOUND GR may also be used to assist with the detailing of difficult junctions.

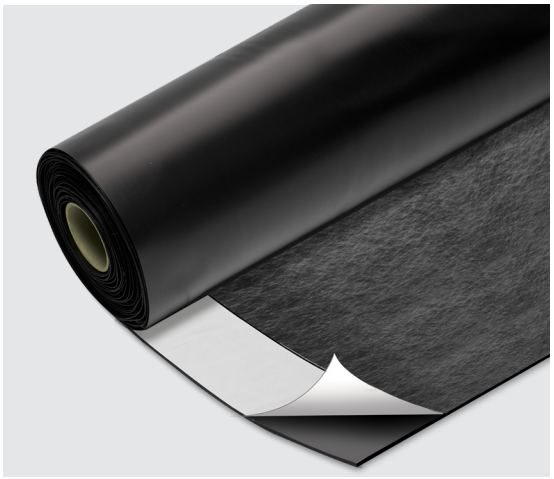
Application to vertical surfaces

COMBISEAL HD, when pre-applied vertically, should be installed to the inside face of the shuttering and/or against the faced-up piled wall, prior to pouring the concrete wall. The membrane should be installed with the black fleece in contact with the freshly placed concrete. Installation should ideally proceed from the top downwards with the short side of the membrane roll level with the top of the piled wall. The roll can then be lowered to the base and then cut to the height of the piled wall. The membrane should be mechanically fixed across the top of the piled wall at 500mm centres through the PREMCRETE TERMINATION STRIP and overcoated with TWINSEAL COMPOUND GR. Lap joints (typically vertical) should be sealed using the COMBISEAL TAPE or the selvedge tape on the membrane.
The lap joint should be rolled with a seam roller to ensure full contact with the membrane. The membrane should be fixed mechanically through the selvedge tape or other taped zones using PREMCRETE METAL WASHER FIXINGS at 500mm centres. This will ensure the integrity of the gas barrier remains intact.
In scenarios where the membrane is being back filled, ie: against a double-sided retaining wall, the membrane should be protected using PREMCRETE PROTECTION BOARD 600 and/or HYDROFLOW HM8 prior to backfill to provide adequate protection. COMBISEAL HD should not be installed above the finished ground level.

COMBISEAL HD

PACKAGING & COVERAGE

Roll Size
1.9m x 10.6m
Roll Weight
30kg
Pallet Quantity
20 rolls



STORAGE & SHELF LIFE

Store in a cool, dry and frost-free conditions.

HEALTH & SAFETY

See separate Material Safety Data Sheet.

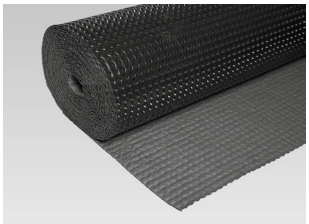
ANCILLARY PRODUCTS



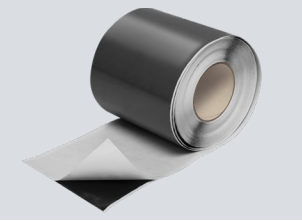
HCR BUTYL TAPE
30mm x 30m



TWINSEAL COMPOUND GR
Epoxy gas resistant waterproof sealing compound



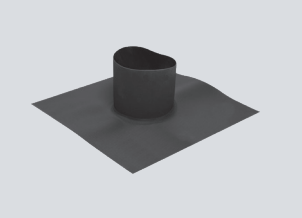
HYDROFLOW HM8
2m x 20m roll



COMBISEAL TAPE
150mm x 45m



METAL WASHER FIXINGS
box of 100



TOP HAT



PROTECTION BOARD
2400x1200mm

BDA Agrément
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