

Soldrain ICD System

Description:

Soldrain ICD is a High-Density Polyethylene membrane for use on walls, floors, vaults, and tunnels with minimal surface preparation required. Also suitable for external foundation waterproofing, and to provide insulated dry lining for walls above ground level that may not be suitable for conventional plaster finishes. Soldrain ICD does not have any mesh or fabric on its surface, which makes cutting and fixing faster and easier. Soldrain ICD CM8 & CM20 membranes are suitable for use in type 'C' (drained protection) structural concrete constructions in accordance with BS 8102:1990, clause 3.2.4.

CM8 is a medium capacity drainage membrane (4 litres/m²) for floors and walls both above and below ground level.

CM20 is the highest drainage capacity membrane in the range giving a void volume of 14 litres/m². Suitable for use on floors and walls in very wet situations or where the large stud height is desired to maximize insulation values. When used on basement floors it can be used either with a perimeter channel or modular drainage system to optimise the flow of ground water towards the sump location.



- Creates a dry, habitable living space in areas previously suffering from damp/wet conditions.
- Forms an internal water management system.
- Quick to Install.
- High drainage capacity.
- Roll Sizes : 2mt x 20mt

Features & Benefits:

- No extensive preparation of structure needed.
- Water can be directed behind the membrane, to a conventional drainage or sump/pump.
- Ingress of water of controlled within the system, and not diverted to other areas.
- Complete freedom of choice of wall finishes.
- Impermeable to water and water vapour.

Typical Uses:

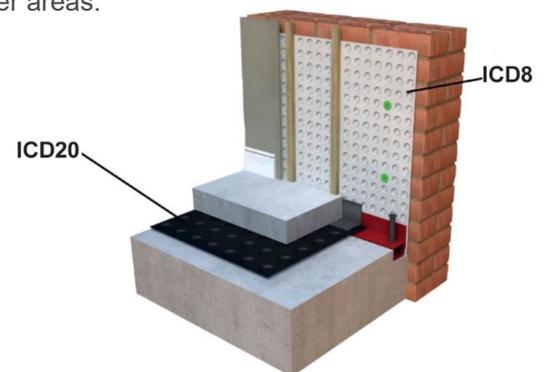
- Walls.
- Floors.
- Vaults.
- Tunnels.
- Above and below ground level.
- Waterproofing applications.
- Damp-proofing applications.

Storage:

- Soldrain ICD membranes should be stored upright, undercover in dry conditions, away from sharp objects, direct sunlight, and high temperatures.
- Keep membranes away from naked flames.

Health & Safety:

- No specific hazards are likely to arise while using any Soldrain Waterproofing Membranes or ancillaries; neither are classified as hazardous in respect to CHIP II Regulations 1999.
- General precaution should be exercised in the use of drills etc. taking particular note of the special risks associated with working in confined spaces (basements) with restricted access/egress.
- Solco advise the use of appropriate PPE, including gloves, hard hat, goggles, high visibility jackets, and steel toe cap boots.
- For further information and advice, please contact Solco, and consult the Material Safety Data Sheet, which is available upon request.



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Installation:

Soldrain ICD System and ancillary components should be installed in accordance with IS325: Part 2 of BS CP 102: 1973, Part 4 of BS 8000: 2014, and BS 8204-1:2003+A1:2009. Reference should also be made to NHBC guidance notes and BS8102:2009.

Holes made in Soldrain membranes must be repaired with a patch of Solco Butyl Tape.

Substrate Preparation:

When used in new construction, the concrete slab must be laid in accordance with BS 8204-1:2003+A1:2009, achieving a flat surface not deviating more than 5 mm from the underside of a 2m straight edge.

Unsound plaster, render or screed should be removed and surfaces made level, with floors to the above tolerances. This can be achieved using a Waterproof Multi-purpose Mortar, or a 3:1 Sand:Cement Mix, incorporating waterproofing additive. Leave all new works to dry thoroughly before ICD membranes are fixed.

In case of walls suffering from mould or masonry fungi, remove surface contamination by brushing, then apply a fungicidal wash to the membranes. If dry rot (*Serpula Lacrymans*) is present in the walls, this will require a detailed assessment before proceeding.

Limitations:

Flat soffits below ground should never be lined with Soldrain membranes, as they require a minimum slope of 10%. Take care when running ICD Membranes around internal and external corners, ensuring the sheet is fixed tight to the angle, ensuring well defined edges for subsequent finishes.

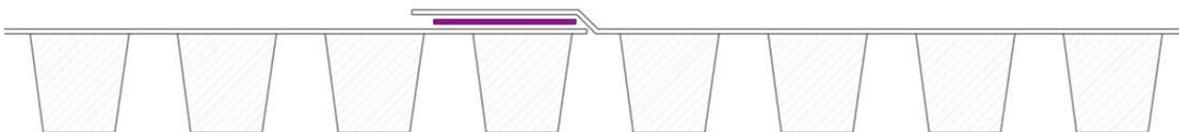
Fixing:

With studs facing the wall, fixing is carried out using Solco Plug & Plug Seals.

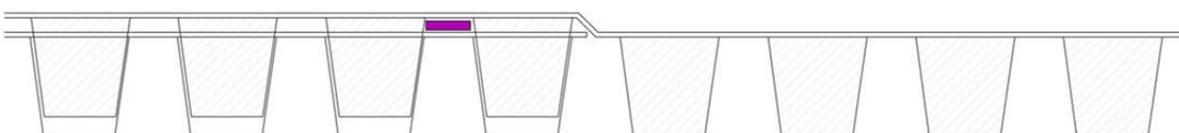
- Fixing densities will depend on the choice of final plastering finish, but should never be greater than 600mm centres.
- Solco Plug & Plug Seals are used to secure the ICD membrane to the substrate. In all damp proofing and waterproofing applications, Soldrain ICD membranes are sealed at flanges (a band of membrane running along the edge with no studs) with Butyl Tape.
- Stud-to-stud joints are overlapped by at least three rows and the flat area of the membrane between rows sealed with 50mm Double-Sided Butyl Tape.
- Always ensure flanges run vertically on walls and are positioned in front of the preceding width of the membrane. In the case of horizontal joints,
- the lower sheet is always positioned to the front.
- In severe conditions of water ingress, in addition to the above, joints may also be closed off using Single-Sided Butyl Tape.
- Take care when running the membranes around internal and external corners to ensure the sheet is fixed tight to the angle, using additional fixings to meet the profile of the substrate, thereby allowing well defined edges during subsequent works. On floors, the membrane is rolled out 'dome down' and joints sealed as above. No fixings are required but can be used to stabilize the membrane.
- At the wall, the floor membrane should be cut flush and the gap sealed with Solco Single-Sided Butyl Tape.

Jointing Details:

Detail 1: Flat Flange to Stud Joint, sealed using Solco Double Sided Tape



Detail 2: Stud to Stud Joint, sealed using Solco Double Sided Butyl Tape



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Installation of ICD8 Membrane:

1. Apply Solcem Solcure Sealer to the concrete walls and slab before applying ICD8, to prevent lime efflorescence and dusting, which can block drainage channels.
1. Drill a hole through the centre of the stud. Take care when drilling holes to avoid excessive masonry dust from falling into the cavity.
2. Place the chosen plug into the hole and drive the fixing with a rubber mallet or club hammer.
3. Spacing between plug fixings should be no greater than 600mm, to ensure a tight fit to the wall. However, this may vary depending on the exact batten/board size and site conditions may dictate otherwise.
4. Seal the membrane at the flanges (a band of membrane running along the edge where no studs are present) with Solco Butyl Tape.
5. Ensure flanges run vertically on walls and are positioned in front of the preceding width of the membrane. In the case of horizontal joints, the lower sheet is positioned to the front.
6. Where there is or could be severe water ingress, joints may also be closed off with Solco Single-Sided Butyl Tape.
7. Seal the stud to stud joints with Solco Double-Sided Butyl Tape.

Stud Frame:

When using this finishing method, Solco Plug & Plug Seals should be applied in a vertical line, roughly corresponding to the stud locations and battens (minimum of 25 x 38mm). Fix the stud frame to the plugs using No. 10 screws (5 mm). If the plugs cannot be applied in a straight line, brackets can be used to hold the battens in place. Ensure the screw depth does not perforate the ICD membrane.

Dot and Dab Dry Lining:

On reasonably flat and stable substrates with a suitably secured ICD membrane, application of a dot & dab dry lining is achievable.

Installation of ICD20 Membrane:

Floor Applications:

1. We recommend an application of Solcem Solcure Sealer to the concrete walls and slab, before application of ICD20, to prevent lime efflorescence and dusting, which can block drainage channels.
2. ICD20 is rolled out on the concrete slab and sealed using Corner Strip (where internal and external corners occur).
3. Sheets of ICD20 membrane should overlap by 3 studs and 'interlock'.
4. Fixings should not be required to floor membranes other than to stabilize the membrane.

When the ICD20 membrane has been applied, refer to your design specification with regards to insulation application (if necessary).

Basement floors are finished with a concrete pour or suitable screed.

Impermeable floor finishes should not be laid until the screed moisture content is below 75% RH.

Wall Applications:

In areas that could be vulnerable to high water ingress, Soldrain ICD20 can be applied to both walls and floors.

1. Drill a hole through the membrane, through the centre of the stud. Take care when drilling holes to avoid excessive masonry dust from falling into the cavity.
2. Place the Solco plug into the hole and drive the fixing home with a wooden or rubber mallet.
3. Seal the membrane at the flanges (a band of membrane running along the edge where no studs are present) with Solco Double-Sided Butyl Tape. Overseal joint with Solco Single-Sided Butyl Tape.
4. Stud-to-stud joints are overlapped by at least two rows (three in very wet conditions) and the flat area is then sealed with Solco Double-Sided Butyl Tape and corner detail. Overseal joint with Solco Single-Sided Butyl Tape.
5. Ensure flanges run vertically on walls and are positioned in front of the preceding width of the membrane. In the case of horizontal joints, the lower sheet is positioned to the front.
6. Where there is or could be severe water ingress, joints may also be closed off with Butyl Tape or corner detail.

Aftercare:

- Soldrain ICD System provides a dry, warm and habitable living space in basements and other areas suffering from chronically damp conditions.
- However, it is equally important that areas that lack natural ventilation are provided with adequate means of condensation control, especially in wet areas such as kitchens, bathrooms, etc. This is best achieved through the provision of an effective mechanical ventilation system.

Technical Data:

Property	CM8	CM20
Sheet Thickness	0.50mm	1.00mm
Stud Height	7mm	20mm
Unit Weight	0.48 kg/m ²	1.00 kg/m ²
Water Vapour Resistance	1800 m ² .s.GPa/kg	3500 m ² .s.GPa/kg
Air Gap Volume	4 litres/m ²	14 litres/m ²
Life Expectancy	>50 years	>50 years
Colour	Clear	Black
Thermal Resistance	0.12 m ² .°C/W	0.17 m ² .°C/W
Drainage Capacity	3.8 l/sm	10 l/sm
Working Temperature	-50°C to + 80°C	-50°C to + 80°C
Softening Temperature	126°C	126°C
Tensile Strength (MD) [BS 12311-2]	416 N	416 N
Tensile Strength (CD) [BS 12311-2]	488 N	488 N
Resistance to Static Loading [BS12730]	>20 kg	>20 kg
Reaction to Fire [BS EN 13501-1]	Class F	Class F

Ancillary Products:

Product	Description	Application	Supply
Solco Plug & Plug Seals	Fixing Plug with rubber seal	Fixing of ICD membrane	10mm x 75mm (100/box)
Solcourse HP DPC	Bitumen-free Polymeric DPC	Jointing membranes at junctions & through wall sections	Various x 20m
Solco Single Sided Butyl Tape	Self-Adhesive Tape	Used around service pipes, Plugs, and bonds ICD Membranes together	100mm x 20m or 150mm x 20m
Solco Double Sided Butyl Tape	Self-Adhesive Tape	Seals joints together	50mm x 20m or 100mm x 20m
Reinforcing Tape	Single Sided Butyl Tape	Seals over Floor/Wall, Wall/Wall, and Wall to Soffit Junctions	300mm wide
Solco Solcem Solcure Sealer	Concrete Surface Sealer	Apply to all surfaces prior to application of ICD membrane	25 litre tub
Perimeter Channel	Perimeter drainage channel & assorted connectors	To basement perimeter or cross slab as per project design	2m lengths

Sumps & Pumps

In addition, Solco offer a comprehensive range of sumps and pumps, which may be required depending on the site report. Please contact Solco for any additional assistance.