

Fosroc® Proofex Sheetdrain 80



constructive solutions

Geocomposite HDPE drainage and protection membrane

Uses

Proofex Sheetdrain 80 is an HDPE cusped drainage sheet. It is located against buried walls and roofs of structures for below ground depths of up to 6m to provide a filtered, drainage void that will route percolating water away from the structure in conjunction with an effective drainage system.

Proofex Sheetdrain 80 is typically used in conjunction with Type A (Barrier) and Type B (Integral) waterproofing systems as part of a complete solution in Low and Variable water table conditions as defined and recommended in BS8102:2009.

Proofex Sheetdrain 80 can also be used as protection layer for Type A membranes from physical damage during backfill operations.

It is an effective alternative to traditional stone 'French' drains providing improved drainage performance.

Where directly cast concrete sub-structure walls need to be drained, Proofex Sheetdrain 80 may be used as a lost shuttering liner.

Proofex Sheetdrain 80 can contribute to an effective waterproofing solution when constructing below ground structures such as basements, retaining walls, service ducts, lift pits and subways generally in conjunction with Type A (Barrier) and / or Type B (Integral) waterproofing systems also available from Fosroc.

Proofex Sheetdrain 80 provides filtered drainage and enhanced protection when used with Proofex waterproof membranes on reservoirs, podium decks and elevated slabs.

Proofex Sheetdrain 80 can be utilised in conjunction with the required ancillaries to provide a gas pressure relief pathway as part of a BS8485 compliant ground gas protection solution.

Advantages

- Cost effective - no need for up to 500mm thick stone drainage layer behind retaining walls
- Easy site application
- Reduced environmental impact - no need for vehicular removal and transportation of spoil off site and subsequent replacing with expensive stone drainage layer
- High flow rate (water and gas)
- High impact resistant, HDPE cusped core with a compressive strength of up to 200 kN/m² provides drainage void around structures under backfill and long term loadings
- Cost effective alternative to 'French Drains'



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Fosroc® Proofex Sheetdrain 80 EN13252:2000 + A1/2005: Geotextiles and related products, for use in drainage systems	
Tensile strength, T_{max} , MD	10 kN/m
Tensile strength, T_{max} , CMD	10 kN/m
Elongation, ϵ_{max} , MD	50%
Elongation, ϵ_{max} , CMD	55%
Cone drop penetration, D_c (GTX)	38 mm
Static puncture resistance F_p (GTX)	1.35 kN
Characteristic opening size, O_{90} (GTX)	160 μ m
Water flow rate, q_N (GTX)	105 l m ⁻² s ⁻¹
Water flow capacity, q_p	1.65 l m ⁻² s ⁻¹
Weathering resistance	Can be exposed up to 14 days
Oxidation resistance	Durable in natural soil with pH 4-9 and soil temperature <25°C for a minimum of 25 years@ service life

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Description

Proofex Sheetdrain 80 is a geocomposite drainage sheet comprising a 8mm thick HDPE cusped core bonded to a non-woven polypropylene geotextile, recommended for most building and civil engineering drainage applications.

Standard compliance

CE mark certification to EN13252:2000/A1:2005 - Geotextile related products for use in drainage systems.

Specification clauses

Specification clause (Drainage Sheet)

The geocomposite drainage and protection sheet shall be Fosroc Proofex Sheetdrain 80. It shall be a single cusped HDPE core, with a non-woven polypropylene geotextile bonded to one side. It shall have a thickness of 8mm and a compressive strength of 200kN/m² suitable for depths of up to 6m and be connected to an effective drainage system in accordance with BS8102:2009 Clause 6.4 . The product shall be installed in accordance with the manufacturer's written instructions.

Specification clause (Ventilation Sheet)

The geocomposite ventilation sheet shall be Fosroc Proofex Sheetdrain 80. It shall be a single cusped HDPE core, with a non-woven polypropylene geotextile bonded to one side. It shall be laid geotextile face down onto a suitably prepared sub-base in strips or as a blanket to achieve the required ventilation performance and be connected to Fosroc Gas Vent Units to the perimeter. The product shall be installed in accordance with the manufacturer's written instructions.

Properties

Membrane core:	8mm HDPE single cusped
Geotextile filter:	Non-woven Polypropylene heat bonded
Geotextile water permeability (EN ISO11058):	100 L/m ² /s
Flow capacity (EN ISO 12958):	1.65 L/m/s under 20kPa
Static puncture CBR (EN ISO12236)	1350N
Tensile strength (EN ISO10319):	10kN/m
Compressive strength (EN ISO25619-2):	200kN/m ²
Geotextile Pore size:	160 microns

Application instructions

Fixing

Proofex Sheetdrain 80 can be held temporarily in position against Type A membranes using Proofex Detail Strip prior to backfilling.

If applied as a draining layer where no membrane is present, suitable mechanical fixings can be used.

Roll end joint

Pull back the geotextile fabric 50mm from one side of joint, and overlap the HDPE cores. Over lap the geotextile fabric. Geotextile should be laid in direction of flow to prevent ingress of fine material. Laps can be secured using Proofex Overtape if required.

Roll edge joints

Peel back the geotextile flap long the edge with the flat strip. Overlap the cusped roll edge onto the corresponding flat strip of the adjacent roll. Proofex Total Tape may be used if a bonded connection is required. Overlap the peeled back geotextile flap onto the adjacent roll. This can be secured using Proofex Overtape if required.

Drainage connection

Pull back sufficient geotextile fabric to wrap around the drain. Cut back the HDPE core to an appropriate length and wrap geotextile fabric around drain.

Top closure

Pull back the geotextile fabric 60mm. Cut back the HDPE core by 50mm and wrap the geotextile fabric over the exposed end to prevent ingress of backfill. This can be secured using Proofex Overtape if required.

Backfilling

Backfilling must be free from any sharp objects or debris, which could damage the Proofex Sheetdrain 80. It should not contain rocks or boulders larger than 50mm. This must be placed against the Proofex Sheetdrain 80 in 300mm layers compacting to 85% modified Proctor. Backfilling should be in direction of laying of strips.

Ancillary materials

Proofex Overtape
Proofex Total Tape
Proofex Gas Vent T Connector*
Proofex Gas Vent Box*

*Required where Proofex Sheetdrain 80 is being utilised as part of a gas pressure relief system to achieve 0.5 points as per BS8485 Table 6.

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Limitations

Proofex Sheetdrain 80 should not be used in areas permanently below the watertable.

Proofex Sheetdrain 80 should not be used in soil containing high concentrations of iron oxides or hydroxides or in extremely fine uniformly graded silts or peat. Please contact Fosroc Technical Department for advice when in doubt.

Proofex Sheetdrain 80 is resistant to chemicals found in normal soil conditions, some chemicals in certain concentrations could have an adverse effect on the drainage performance. Please contact Fosroc Technical Department for advice when in doubt.

Proofex Sheetdrain 80 should not be used in soils containing a high percentage particle sizes below the pore size of the geotextile.

For soil / ground types that are not well suited to mechanical compaction, rounded Type 1 stone should be placed between the Proofex Sheetdrain and the ground.

Estimating

Product	Packaging
Proofex Sheetdrain 80:	2.4 m x 20 m roll

Storage

The product must not be exposed directly to UV radiation for over two months.

Precautions

There are no known health hazards associated with Proofex Sheetdrain 80 in normal use.

Health and safety

Proofex Sheetdrain 80 weighs approximately 32kg. Each roll should be lifted by a minimum of two site operatives.

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Important note

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