

Install: Fildrain 7D & 7DH

General Advice

These instructions should be read in conjunction with the contract specification and drawings. They are intended to provide guidance in normal installation situations and are addressed to the installer on site. If there are any questions related to the design, unusual installation challenges, or any doubt, consult ABG Design Team for further advice. Please read all instructions before commencing construction work.

Description

Fildrain 7D and 7DH are preformed water drainage or gas vent geocomposites consisting of a HDPE cusped core laminated to a geotextile filter on both sides. When laid, Fildrain forms a blanket to collect and transmit water or gas from the surrounding ground into adjacent ditches or pipes.

Supply

- **Fildrain 7D and 7DH** are supplied in rolls

Equipment Required

- Appropriate PPE
- Sharp knife
- Sand bags or fill material for ballasting

Installation

Step 1

Fildrain 7D and 7DH are supplied in rolls wrapped for protection against UV light (**Fig 2**). Do not remove the wrapper until ready to install. Slings are provided for the safe off-loading of rolls. These slings are designed for single use in order to remove the rolls from the delivery vehicle to an appropriate site storage location. Store rolls of **Fildrain** on a firm base and do not stack more than six rolls high.



Fig. 1: Fildrain partially backfilled



Fig. 2: Rolls supplied to site including lifting straps



Fig. 3: Moving rolls around site



Fig. 4: Prepared formation

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Step 2

The formation on which **Fildrain** is to be unrolled should be firm, free of roots and sharp objects and should be graded smooth so that there are no ruts or ridges greater than 50mm high (**Fig 5**). **Fildrain** will bend to follow stepped or benched ground profiles.



Fig. 5: Unrolling Fildrain onto firm formation

Step 3

In choosing the commencing point and direction of laying, consider the outfall positions, the prevailing wind direction, site slope and access point for materials. **Fildrain** is designed to be laid so that the major flow of water is along the roll length.



Fig. 6: Using sandbags to prevent wind uplift

Step 4

Plan only to lay as much **Fildrain** as can be backfilled that day, to avoid uplift in strong winds and the risk of inundation by silt-laden runoff before filling. Unused rolls may be used as ballast on flat areas. **Fildrain** can be secured temporarily by means of sandbags or small piles of fill material (**Fig 6**).

Step 5

Unroll the first roll of **Fildrain** into position. Adjacent cores may be overlapped by 200mm for linear installations or the next roll should be placed such that the black drainage cores butt together along the edge for transverse applications. The geotextile edge flap overlaps onto the geotextile of the adjacent roll (**Fig 7**). The flaps may be held down by sandbags or sewing. Continue to lay rolls to create a constant layer. The ends of the rolls can be overlapped at least 300 mm onto the adjacent roll so that the water or gas can flow out of the end of the top roll and onto the drainage side of the roll below. Subject to site safety procedures, rolls can be cut to length using a sharp knife.



Fig. 7: Overlap of adjacent rolls

Step 6

Before backfilling, make sure there are no gaps in the geotextile cover where soil or clay could enter into the drainage core. Ensure that water/gas can exit freely. Outfalls for the water or gas collected by **Fildrain** may consist of a perforated pipe laid in a gravel/filter trench. For water drainage the **Fildrain** may discharge to a toe ditch.

Step 7

To prevent damage, mechanical plant must not operate directly on **Fildrain**. The first layer of backfill should be at least 150 mm thick or twice the maximum particle dimension and be spread by tracked plant (**Fig 8**). Fill material should be tipped on the advancing layer, not directly onto **Fildrain**, and the fill should be compacted closely behind the spreading operation (**Fig 9**).

Step 8

A minimum cover of 450 mm of acceptable fill is recommended over **Fildrain** before general use by site traffic. Heavy plant must not be used on slopes.

Step 9

In the event that the **Fildrain** geotextile is damaged during installation, small areas can be repaired using a patch of similar textile at least 300 mm larger than the damaged area. If the dimpled drainage core has been damaged, this should be cut out carefully and a new piece of **Fildrain** inserted along with an over-size patch of geotextile to prevent backfill ingress.

COSHH

There are no known COSHH hazards associated with the installation of **Fildrain** but care should be taken when cutting. Cut edges can be sharp and may flick up in windy conditions.

Terms & Conditions

Site specific engineering design should be carried out after site investigation has provided all the necessary information. The assessment of suitable safety factors in relation to each particular project must always remain the responsibility of the design engineer.



Fig. 8: Site plant operating on layer of backfill



Fig. 9: First layer of backfill laid