

Deckdrain - Reservoir Base Drainage

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. If there are any questions related to the design, unusual installation challenges, or any doubt, consult ABG for further advice. In all situations, responsibility for installation remains with the Installer.

Description

Deckdrain is a high performance, high strength pre-formed drainage layer comprising a cusped HDPE core bonded to a geotextile filter. The geotextile is laminated onto the dimpled side of the core. Deckdrain is laid with the geotextile facing downwards with the open cups facing upwards (black side up) to receive the concrete for the base. It acts as a lost shutter and offers both uplift pressure relief and under slab drainage of groundwater. (Fig. 1 & 2).

Supply

- **Deckdrain**
- **Abseal Butyl Tape**

Equipment Required

- Sharp knife
- Spreader boards

Preparation for laying and storage

Deckdrain is supplied in rolls packed in an opaque plastic bag for protection against UV light. The bags should not be removed until required and once laid the Deckdrain should be covered within 28 days. The rolls should be stored on a flat dry surface and covered with a light proof tarpaulin. Individual rolls weigh approx. 48-58kg and approximately 1.1 –2.2m wide. They should not be dragged across surfaces. (Fig. 3). The formation should be well graded and compacted with no roots or sharp objects and no undulations greater than 50mm.



Fig. 1: Deckdrain Reservoir Base Drainage cut-away diagram



Fig. 2: Concrete pour over the Deckdrain



Fig. 3: Easy to transport rolls across site

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Installing Deckdrain Liner and concreting base

Step 1

Ideally the Deckdrain is laid in one continuous length to the outlet pipe or trench. The roll length aligned with the direction of flow. (Fig. 4). Lay the first roll black side up and geotextile side down against the soil.

Step 2

The next roll is laid abutting the first roll on the top side (black) and the geotextile flap is overlapped on the under side. There should be only one overlap at each joint. (Fig. 5). For end to end connection an additional strip of geotextile should be placed along the line of the joint to prevent soil ingress.

Step 3

The rolls are cut to suit edge details or trench or outfall details ensuring that the geotextile is continuous over the whole of the underside. (Fig. 4). If necessary an extra layer of geotextile should be placed before placing cut pieces of Deckdrain onto the surface.

Step 4

Once the area for the first concrete pour has been covered. All surface joints on the black upper side are then sealed using the **Abseal Butyl Tape**. (Fig. 5) Note: The **Deckdrain** panels should be wiped dry and the tape warmed to achieve a satisfactory bond. All edges should be sealed to prevent concrete intrusion. To allow access walk boards should be used to protect the composite from foot traffic.

Step 5

Timber stop-ends are mounted on the Deckdrain along with any specified reinforcement suitably spaced away from the Deckdrain using concrete spacers. (Fig. 6).

Step 6

Inspect finished joints between panels ensuring no voids exist through which wet concrete can escape.

Step 7

Place the concrete with care making sure that the composite is not dislodged during the pouring operation or concrete is allowed to enter the open core under the stop end. (Fig. 7).



Fig 4: Rolls laid in line with direction of main flow and cut with sharp knife to suit edge details



Fig 5: Underlying geotextile flap overlap and tape joints to core on the top

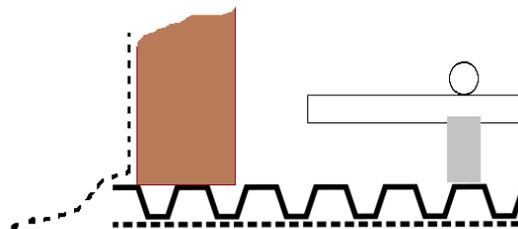


Fig 6: Stop-end and reinforcement concrete spacers placed on core. Use geotextile strip to protect exposed core on outside of stop-end



Fig 7: Deckdrain laid towards the drainage trench