CCW MiraDRAIN® 2000

DRAINAGE COMPOSITE

DESCRIPTION

CCW MiraDRAIN 2000 is an intermediate flow drainage composite consisting of a three-dimensional, high-impact polystyrene core, and a nonwoven filter fabric. The filter fabric is bonded to the dimpled polystyrene core to minimize fabric intrusion and to prevent the passage of soil particles into the core while allowing water to pass freely.

TYPICAL USES

CCW MiraDRAIN 2000 is designed for use in vertical, single-sided drainage applications. Its intermediate flow rate and compressive strength make CCW MiraDRAIN 2000 ideal for use in shallow depths not exceeding 10 ft; where high-flow and high-compressive strength requirements do not exist. CCW MiraDRAIN 2000 is ideally suited for most residential applications.

The flat side of CCW MiraDRAIN 2000 fits directly against wall surfaces making it ideal for foundation walls, retaining walls, bridge abutments, and other similar structures. CCW MiraDRAIN 2000 also serves as a protection course over CCW waterproofing membranes.

FEATURES AND BENEFITS

- Manufactured at an ISO 9001:2000 Facility
- Relief of hydrostatic pressure buildup against subterranean surfaces
- Intermediate flow drainage capacity
- No-clogging drainage performance
- Intermediate compressive strength system that can withstand installation and in-situ earth stresses
- Enhancement of waterproofing system by channeling water away and providing a secondary water retention layer
- Cost-saving, light weight, easy-to-install panels eliminate the need for aggregate

INSTALLATION

GENERAL INFORMATION

CCW MiraDRAIN prefabricated drainage panels may be installed in a variety of construction applications. They may be installed against retaining walls and foundation walls (both waterproofed and non-waterproofed). CCW MiraDRAIN can be cut with a utility knife or scissors. The panels can terminate at the top of the footing and are flexible enough to form right angles to cover the top of the footing. CCW MiraDRAIN eliminates the need for a protection course over waterproofing systems. Native soils can be used over CCW MiraDRAIN. (Contact your local Carlisle Coatings & Waterproofing representative for specific guidelines).

FOUNDATION WALLS / VERTICAL APPLICATIONS

The CCW MiraDRAIN panel can be installed in rows or columns with the fabric side toward the soil. Each method has its advantages depending on the criteria of the project as to which method is best.

When installing the CCW MiraDRAIN in rows:

- Place the longitudinal edge of the core against the wall so that it is flush with the wall footing.
- Attach subsequent panels in shingle fashion, placing the longitudinal edge of the upper panel over the flanged longitudinal edge of the lower panel;

When installing the CCW MiraDRAIN in columns:

- Start at the low point of the wall and attach the panel to the wall.
- Adjacent panels should be joined together with the lateral edge of the connecting panel placed over the flanged edge of the previous panel;

The fabric from the adjacent panels should overlap the preceding panel. The fabric can be adhered with CCW DRAIN GRIP™ or duct tape. The top or terminal edge of the CCW MiraDRAIN should be sealed by wraping the extra filter fabric around to the back side of the panel, to prevent soil or other foreign construction materials from intruding into or behind the panels. A “set back” or “ledge” condition may be encountered on some construction applications. Where this condition exists, CCW MiraDRAIN panels should be installed beginning at the bottom of the wall and ending at the ledge. Subsequent courses of CCW MiraDRAIN should be installed flat against the upper wall portion and placed so that 4-6" (10-15cm) extend down and over the lower edge. The overlapping CCW MiraDRAIN sections will be pushed flush against the wall during backfilling.

Attachment Method– No Waterproofing Membrane

The CCW MiraDRAIN should be attached to non-waterproofed walls with CCW DRAIN GRIP contact adhesive, CCW SecurTape tape or concrete nails. The CCW MiraDRAIN will be permanently secured upon completion of backfilling. Backfilling should be placed within two weeks. Backfill to at least 6" (15cm) above the top edge of the CCW MiraDRAIN.

Attachment Method– Using CCW MiraDRI 860/861, CCW 525, CCW Sure Seal, or CCW-500R Waterproofing Membranes

The CCW MiraDRAIN should be attached with CCW DRAIN GRIP contact adhesive or CCW SecurTape. Apply DRAIN GRIP around the panel edge and in 4" (10cm) ribbons on the back of the CCW MiraDRAIN and on the corresponding surface of the CCW Membrane. After the CCW DRAIN GRIP has been allowed to dry, mate the two surfaces together. The CCW MiraDRAIN will be permanently secured upon completion of backfilling. Backfilling should be placed as soon as possible. Backfill to at least 6" (15cm) above the top edge of the CCW MiraDRAIN.

Attachment Method– Using CCW MiraCLAY Waterproofing Membrane

The CCW MiraDRAIN should be attached over the CCW MiraCLAY membrane using concrete nails and washers.

DRAINAGE COLLECTOR/DISCHARGE SYSTEM

Collector Pipe

Place CCW QuickDRAIN or collector pipe as required in design details. The CCW QuickDRAIN should be installed adjacent to the CCW MiraDRAIN. Care must be taken to ensure a continuous drainage path between the CCW QuickDRAIN and the CCW MiraDRAIN panels. For installations where a collector pipe is specified, encapsulate the collector pipe in a gravel bed with a supplemental section of filter fabric as a separator/filter.

DETAIL REQUIREMENTS

For standard installation details, follow the CCW MiraDRAIN detail drawings. For non-standard installation instructions contact your local Carlisle Coatings & Waterproofing representative.

PACKAGING

Packaging: 2'x50' (0.6m x 15.24m) and 4'x50' (1.22m x 15.24m) rolls *Availability:* CCW MiraDRAIN 2000 is made in the USA and is sold through a highly qualified sales representative network. CCW MiraDRAIN 2000 is readily available from a national system of Carlisle Coatings & Waterproofing distributors. *Cost:* Consult your Carlisle Coatings & Waterproofing representative for price quotes.

CAUTION / LIMITATIONS

Limit ultra-violet exposure by backfilling within 7 days of installation. Any panels damaged during installa-tion should be replaced by the installer. Limitations: MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. Carlisle Coatings & Waterproofing representatives should be consulted concerning the suitability of MiraDRAIN in unusual soil environments.

MAINTENANCE

CCW MiraDRAIN prefabricated drainage panels require no maintenance if installed in accordance with the manufacturer's instructions.

LIMITED WARRANTY

Carlisle Coatings & Waterproofing Incorporated (Carlisle) warrants this product to be free of defects in workmanship and materials only at the time of shipment from our factory. If any Carlisle materials prove to contain manufacturing defects that substantially effect their performance, Carlisle will, at its option, replace the materials or refund its purchase price.

This limited warranty is the only warranty extended by Carlisle with respect to its materials. There are no other warranties, including the implied warranties of merchantability and fitness for a particular purpose. Carlisle specifically disclaims liability for any incidental, consequential, or other damages, including but not limited to, loss of profits or damages to a structure or its contents, arising under any theory of law whatsoever.

The dollar value of Carlisle's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the Carlisle material in question.

TECHNICAL DATA

Property	Test Method	Unit	Typical Value
Core			
Thickness	ASTM D 1777	in (mm)	0.25 (6.35)
Compressive Strength	ASTM D 1621	psf (kPa)	10,800 (517)
Maximum Flow Rate[1]	ASTM D 4716	gpm/ft² (l/min/m)	12.5 (155)
Installed Vertically[2]	ASTM D 4716	gpm/ft² (l/min/m)	8.5 (106)
Fabric (140NC)			
Apparent Opening Size	ASTM D 4751	US Std Sieve (mm)	70 (0.21)
Water Flow Rate	ASTM D 4491	gpm/ft² (l/min/m)	140 (5,698)
Grab Tensile Strength	ASTM D 4632	lbs (kN)	100 (0.45)
Grab Longation	ASTM D 4632	%	50
Puncture Resistance	ASTM D 4833	lbs (kN)	65 (0.30)
System			
Performance Index	*		14,050

All flow rates were tested at 3600 psf. * Drainage Performance Index is a function of ASTM D 4833, D 4632 and D 1621 [1]In plane flow rate @ gradient of 1.0
[2]Installed flow rate with soil overburden at vertical gradient of 1.0

Coatings & Waterproofing

Carlisle Coatings & Waterproofing Incorporated
900 Hensley Lane
Wylie, Texas 75098
Toll Free: (800) 527-7092
Website: www.carlisle-ccw.com