



CCW MiraDRAIN® HC

DRAINAGE COMPOSITE

DESCRIPTION

CCW MiraDRAIN HC is a high-flow drainage composite consisting of a 1" thick, three-dimensional, high-impact polystyrene core wrapped with a nonwoven filter fabric. The filter fabric is bonded to the individual dimples of the molded polystyrene core to minimize fabric intrusion into the flow channels caused by backfill pressure. The fabric serves as a filter medium to prevent the passage of particles into the core, while allowing excess water to pass freely into the drainage system. The CCW MiraDRAIN HC is available in various widths, including: 6", 12", 18", 24", 36" and 48" (punched and non-punched).

TYPICAL USES

CCW MiraDRAIN HC is used in place of traditional aggregate filled french drains or trench drains. CCW MiraDRAIN HC is primarily used along roads and highways as an edge drain. CCW MiraDRAIN HC is also used on athletic fields, golf courses, playgrounds, airports and as foundation drains.

FEATURES AND BENEFITS

- CCW MiraDRAIN HC's drainage capacity - up to three times the flow of aggregate or sand - assures effective drainage.
- Consistent multi-directional core configuration provides a uniform flow path for water to escape.
- High compression strength to withstand overburden stresses.
- Eliminates the need for bringing aggregate to the construction site.
- Narrow trench required for installation.
- Native soil can be used for backfilling.

INSTALLATION

CCW MiraDRAIN HC can be easily installed using the following procedure:

Dig a 4" (10.2cm) to 6" (15.2cm) wide trench using a standard trenching machine. The depth of the trench will depend on which drain width and application. When determining the depth add an additional 3" for coverage over the drain. Place the CCW MiraDRAIN HC into the trench to fit against the bottom and sides of the trench. Use the native soil as the backfill and place in layers, compacting prior to adding the next layer. Continue to fill the trench until the desired height is obtained.

Connectors are also available. To connect two rolls together, use the 'splice' connector. After placing the 'splice' over the two ends, use waterproof tape to keep in place. Once the HC is placed in the trench, attach End Outlet to the end of the roll to make the transition from HC to a corrugated 4" pipe. The Side Outlet is used to make line transition from HC for collection of water along the drain length. A 'T' outlet is available to branch one drain to two other rolls. Make sure all connectors are taped with waterproof tape.

*These guidelines serve as a basis for installation. Detailed instructions for installation and termination procedures are included in the product packaging.

PACKAGING INFORMATION

Packaging: CCW MiraDRAIN HC is available in rolls of:
 4' x 50';
 3' x 50', 100', 150';
 2' x 100', 150', 500';
 18" x 100', 150', 500';
 12" x 100', 150', 500';
 6" x 100', 150', 500';

TECHNICAL DATA

| Property | Test Method | Unit | Typical Value |
|---------------------------------|-------------|---|---------------|
| Core | | | |
| Composition | — | — | HIPS |
| Thickness | ASTM D 1777 | in (mm) | 1.0 (25.4) |
| Compressive Strength | ASTM D 1621 | psf (kPa) | 9,500 (455) |
| In Plane Flow Rate ¹ | ASTM D 4716 | gpm/ft ² (l/min/m ²) | 82 (1,300) |
| In Plane Flow Rate ² | ASTM D 4716 | gpm/ft ² (l/min/m ²) | 21(260) |
| Fabric (140NC) | | | |
| Apparent Opening Size | ASTM D 4491 | US Std Sieve (mm) | 70 (0.21) |
| Water Flow Rate | ASTM D 4491 | gpm/ft ² (l/min/m ²) | 140 (5,698) |
| Grab Tensile Strength | ASTM D 4632 | lbs (kN) | 100 (0.45) |
| Puncture Resistance | ASTM D 4833 | lbs (kN) | 65 (0.30) |

All flow rates were tested at 3600 psf. ¹In plane flow rate @ gradient of 1.0
 *Drainage Performance Index is a function of ASTM D 4833, D 4632 and D 1621

²Installed flow rate with concrete overburden @ horizontal gradient of 0.05

CAUTIONS / LIMITATIONS

Limit ultraviolet exposure by backfilling within 7 days of installation. Any panels damaged during installation should be replaced by the installer. *Limitations:* CCW 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 CCW MiraDRAIN in unusual soil environments.

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 affect 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.