



# WATERPROOFING

## MiraDRAIN® HC

### Description

CCW MiraDRAIN HC is a high-flow drainage composite consisting of a 1"-thick, three-dimensional, high-impact polypropylene 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.

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

### Features and Benefits

- Michigan Department of Transportation (MDOT) Approved Manufacturers List - 910.05A
- High drainage capacity - up to three times the flow of aggregate or sand - ensures effective drainage
- Consistent, multi-directional core configuration provides a uniform flow path for water to escape
- High compression strength withstands overburden stresses
- Eliminates the need for aggregate
- Narrow trench required for installation
- Native soil can be used for backfill

### Installation

MiraDRAIN HC can be easily installed using the following procedure:

Dig a 4" (10.2 cm) to 6" (15.2 cm) 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 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.

### Limitations

Limit ultraviolet exposure by backfilling within 30 days of installation. Any panels damaged during installation should be replaced by the installer.

MiraDRAIN is resistant to chemicals in normal soil environments. However, some reagents may affect its performance. CCW representatives should be consulted concerning the suitability of CCW MiraDRAIN in unusual soil environments.

### Packaging

48" x 50' rolls - Punched

24" x 150' rolls - Punched

12" x 150' rolls - Punched

6" x 150' rolls - Punched

MiraDRAIN is made in the USA and sold through a highly qualified sales representative network.

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### Typical Properties

Property	Method	Unit	Typical Value
<b>CORE</b>			
Composition	—	—	HIPS
Thickness	ASTM D1777	in (mm)	1.0 (25.4)
Compressive Strength	ASTM D1621 (mod)	psf (kPa)	9,500 (455)
In Plane Flow Rate	ASTM D4716	gpm/ft (l/min/m)	30 GPM/FT
<b>FABRIC</b>			
Apparent Opening Size	ASTM D4751	US Std Sieve (mm)	40
Water Flow Rate	ASTM D4491	gpm/ft <sup>2</sup> (l/min/m)	110 GPM/FT <sup>2</sup>
Grab Tensile Strength	ASTM D4632	lbs (N)	100 (445)
CBR Puncture Strength	ASTM D6241	lbs (N)	250 (1113)
Grab Elongation	ASTM D4632	%	50

### 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.