

DELTA®

DELTA® protects property. Saves energy. Creates comfort.

COSELLA DÖRKEN

DELTA®-DRAIN 000's

The Direct Route For Re-Directing Ground Water.™

Drainage and protection system for commercial construction.



■ For relief of hydrostatic pressure in vertical foundation applications

■ For water control in deep excavations

■ For structural deck waterproofing in horizontal applications

PREMIUM QUALITY

Proven High-Strength, High-Flow Solutions For Your Toughest Drainage Needs.

DELTA®-DRAIN is an effective method to control the flow of damaging soil moisture through cracks and gaps in below grade structures, while relieving hydrostatic pressure.

It is comprised of a multi-layer geocomposite combining a high compressive strength core with a geotextile, bonded to the core for lasting durability. DELTA®-DRAIN creates an essential path for the vertical and horizontal drainage of soil moisture and filtering of soil particles.

DELTA®-DRAIN has been successfully used in a wide variety of exterior applications where redirection of ground water and pressure relief are primary concerns.

DELTA®-DRAIN's large size makes installation faster. Extra width means less material overlap, less seams, less labor, which leads to an important point -- less cost.

DELTA®-DRAIN is typically used in conjunction with liquid and sheet applied waterproofings and as a stand alone drainage composite for civil engineering applications.

PROPERTIES	
CORE	TEST METHOD
Color	
Weight	ASTM D-3776-96
Compressive Strength	ASTM D-1621-94 (mod)
Thickness	ASTM D-1777-96
Material	
FILTER FABRIC	
Grab Tensile	ASTM D-4632-91
Elongation	ASTM D-4632-91
Trapezoidal Tear	ASTM D-4533-91
Puncture Strength	ASTM D-4833-88
Mullen Burst	ASTM D-3786
Apparent Operating Size	ASTM D-4751-99
Permittivity	ASTM D-4491-99
Water Flow Rate	ASTM D-4491-99
Weight Typical	ASTM D-5261-92
UV Resistance	ASTM D-4355-92
Material	
COMPOSITE SYSTEM	
Water Flow Rate (V)	ASTM D-4716-99
Water Flow Rate (H)	ASTM D-4716-99
Roll Size	a
Roll Size	b
Roll Weight	a
Roll Weight	b

DELTA®-DRAIN 2000

The DELTA®-DRAIN 2000 system consists of a three-dimensional, tear resistant polypropylene core and non-woven, needle-punched geotextile. Fully bonding the geotextile to the core's dimples prevents the geotextile from being pushed into the flow channels by back-fill.

Water can pass freely and easily through the geotextile and into the drain core where gravity feeds it into the drainage system and pipes.

Applications:

- Tunnel construction
- Drains off water from underground walls and structures by placing sheets vertically
- Retaining walls
- Canals
- Hydrostatic pressure relief



DELTA®-DRAIN 2000

Imperial	Metric
	Black
2.45 oz/ft ²	750 g/m ²
11,000 psf	550 kN/m ²
0.40 in.	10 mm
	PP-Polypropylene
140NC	140NC
100 lbs	445 N
60%	60%
45 lbs	200 N
65 lbs	289 N
210 psi	1446.6 kPa
70 sieve size	0.212 mm
1.8 sec ⁻¹	1.8 sec ⁻¹
140 gal/min/ft ²	5703 l/min/m ²
4.0 oz/yd ²	135 g/m ²
70% (500 hrs)	70% (500 hrs)
	Non-Woven PP
18 gal/min/ft	223 L/min/m
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6.0 ft x 50 ft	1.83 m x15.25 m
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56 lbs	25 kg
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DELTA®-DRAIN 6000

The DELTA®-DRAIN 6000 system is the heavy duty version of the DELTA®-DRAIN 2000. DELTA®-DRAIN 6000 system consists of a three-dimensional, tear resistant polypropylene core and non-woven, needle-punched filter geotextile. Fully bonding the geotextile to the core's dimples prevents the geotextile from being pushed into the flow channels by back-fill. Water can pass freely and easily through the geotextile and into the drain core where gravity feeds it into the drainage system and pipes.

DELTA®-DRAIN 6000 meets and exceeds all industry standards for high performance drain boards.

Applications:

- Below grade drainage in conjunction with liquid and sheet applied waterproofing
- Pilewall drainage
- Lagging wall drainage
- Bridge abutments
- Roof decks
- Hydrostatic pressure relief



DELTA®-DRAIN 6000

Imperial	Metric
	Black
2.75 oz/ft ²	830 g/m ²
15,100 psf	723 kN/m ²
0.40 in.	10 mm
	PP-Polypropylene
140NC	140NC
100 lbs	445 N
60%	60%
45 lbs	200 N
65 lbs	289 N
210 psi	1446.6 kPa
70 sieve size	0.212 mm
1.8 sec ⁻¹	1.8 sec ⁻¹
140 gal/min/ft ²	5703 l/min/m ²
4.0 oz/yd ²	135 g/m ²
70% (500 hrs)	70% (500 hrs)
	Non-Woven PP
18 gal/min/ft	223 L/min/m
3.2 gal/min/ft	40 L/min/m
6.0 ft x 50 ft	1.83 m x 15.25 m
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63 lbs	28 kg
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DELTA®-DRAIN 6200

The DELTA®-DRAIN 6200 is a specially manufactured version of DELTA®-DRAIN 6000 offering the ultimate in drain solutions that incorporates a plastic sheet adhered to the back surface of the drain core. This plastic sheet offers a protective layer on the flat side of the plastic core to prevent die cutting of soft liquid or sheet applied waterproofing membrane.

DELTA®-DRAIN 6200 can also be used in lagging wall applications. Additionally, the plastic backing on DELTA®-DRAIN 6200 can act as a slipsheet between the drain board and the adjacent structure.

Applications:

- Below grade drainage in conjunction with liquid and sheet applied waterproofing
- Foundation walls
- Parking decks - vertical applications
- Hydrostatic pressure relief



DELTA®-DRAIN 6200

Imperial	Metric
	Black
2.75 oz/ft ²	830 g/m ²
15,100 psf	723 kN/m ²
0.40 in.	10 mm
	PP-Polypropylene
140NC	140NC
100 lbs	445 N
60%	60%
45 lbs	200 N
65 lbs	289 N
210 psi	1446.6 kPa
70 sieve size	0.212 mm
1.8 sec ⁻¹	1.8 sec ⁻¹
140 gal/min/ft ²	5703 l/min/m ²
4.0 oz/yd ²	135 g/m ²
70% (500 hrs)	70% (500 hrs)
	Non-Woven PP
18 gal/min/ft	223 L/min/m
3.2 gal/min/ft	40 L/min/m
6.0 ft x 50 ft	1.83 m x 15.25 m
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64 lbs	29 kg
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DELTA®-DRAIN 9000

The DELTA®-DRAIN 9000 is a high-strength, high performance drain board ideally suited for demanding horizontal applications in plaza deck, split slab and horizontal flat work and pavement construction. DELTA®-DRAIN 9000 utilizes a high-strength woven monofilament filter fabric that offers ideal drainage and support under concrete, soil and beddings.

Applications:

- Plaza decks
- Garden roofs/terraces
- Earth shelters
- Split slab construction
- Planter boxes
- Parking decks - horizontal applications



DELTA®-DRAIN 9000

Imperial	Metric
	Black
3.05 oz/ft ²	930 g/m ²
18,000 psf	862 kN/m ²
0.40 in.	10 mm
	PP-Polypropylene
FW 402	FW 402
365 lbs	1624 N
24%	24%
115 lbs	512 N
90 lbs	401 N
450 psi	3,100 kPa
40 sieve size	0.42 mm
2.1 sec ⁻¹	2.1 sec ⁻¹
145 gal/min/ft ²	5907 l/min/m ²
6.1 oz/yd ²	206 g/m ²
90% (500 hrs)	90% (500 hrs)
	Woven PP
27 gal/min/ft	334 L/min/m
5.4 gal/min/ft	67 L/min/m
6.0 ft x 50 ft	1.83 m x 15.25 m
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70 lbs	32 kg
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A PROUD MEMBER OF:



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CSI

Construction Specifications Institute

ASCE

American Society of Civil Engineers

CSC

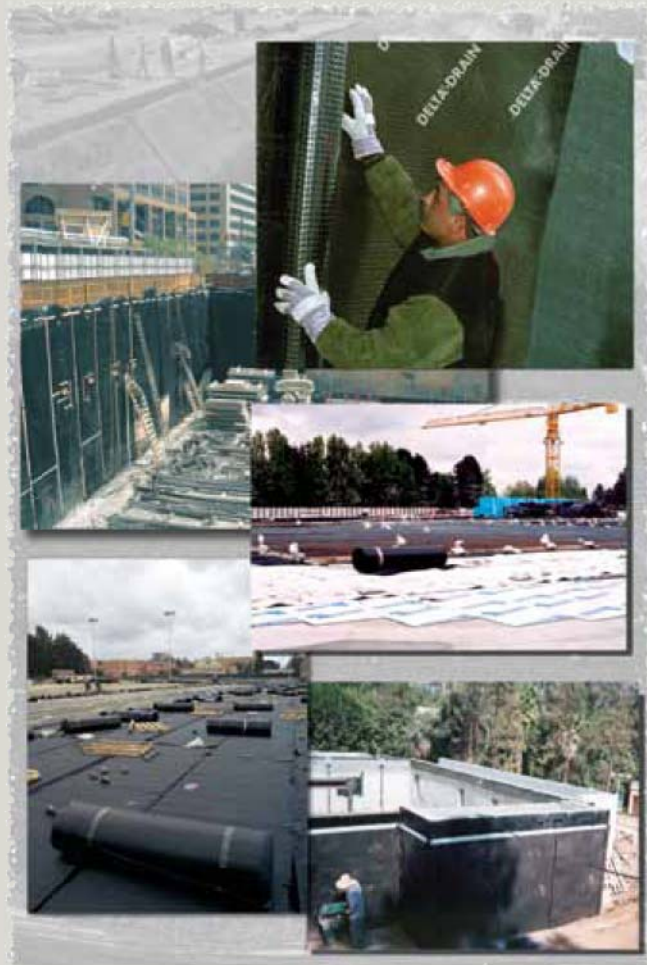
Construction Specifications Canada

IFA

Industrial Fabrics Association International

GMA

Geosynthetic Materials Association



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DELTA®

20 Year Product Warranty

COSELLA DÖRKEN

Cosella-Dörken Products Inc.
4655 Delta Way
Beamsville, Ontario
L0R 1B4
(905) 563-3255
Fax: (905) 563-5582
1-888-4 DELTA 4
info@cosella-dorken.com
DELTADRAIN000.com

A company of the Dörken Group

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DELTA®-branded quality products manufactured by Cosella-Dörken.

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