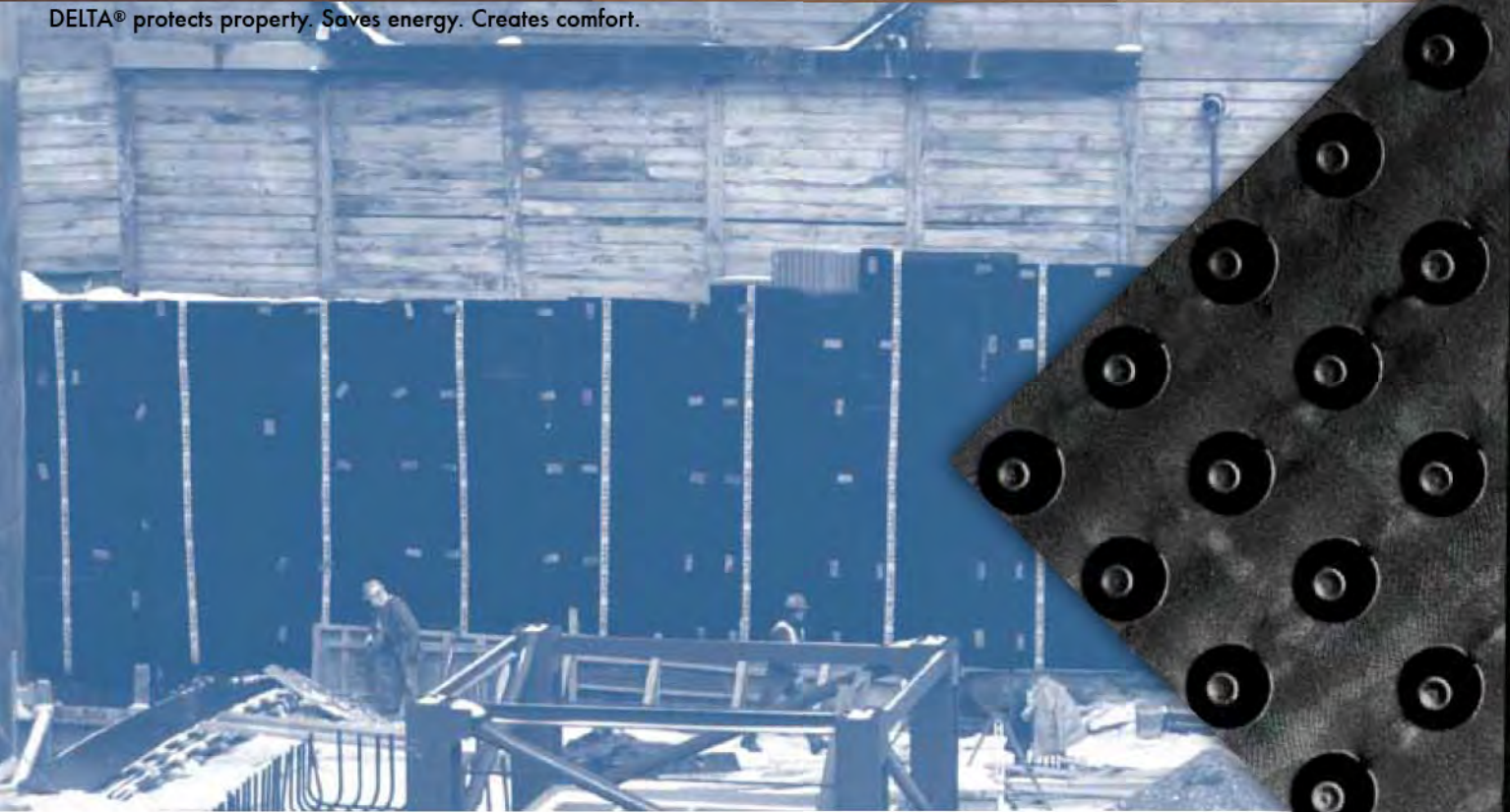


DELTA®

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.



PREMIUM QUALITY

■ For relief of hydrostatic pressure in vertical foundation applications

■ For water control in deep excavations

■ For structural deck waterproofing in horizontal applications

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
---	---
6.0 ft x 50 ft	1.83 m x 15.25 m
---	---
56 lbs	25 kg
---	---

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
---	---
63 lbs	28 kg
---	---

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
---	---
70 lbs	32 kg
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A PROUD MEMBER OF:



American Concrete Institute®

CSI

Construction Specifications Institute

ASCE

American Society of Civil Engineers

CSC

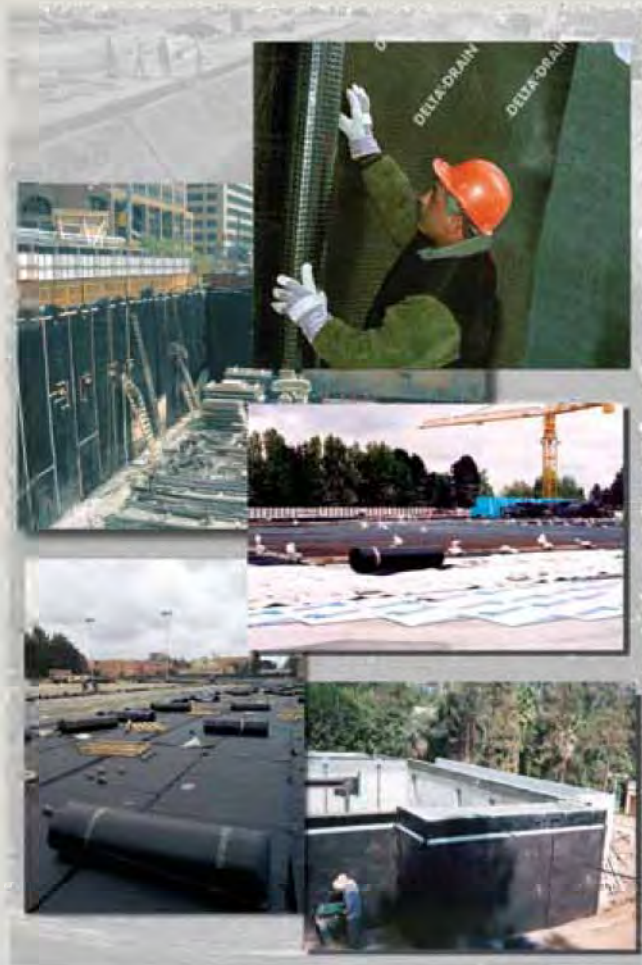
Construction Specifications Canada

IFA

Industrial Fabrics Association International

GMA

Geosynthetic Materials Association



DELTA® is a registered trademark of Ewald Dörken AG, Herdecke, Germany

DELTA®

20 Year Product Warranty

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A company of the Dörken Group

The information printed in this brochure reflects product information and specifications at the date of printing. The manufacturer reserves the right to make changes when necessary.

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

CD 02/09 2M Printed in Canada