

PREMIUM QUALITY

## DELTA<sup>®</sup>-THENE DELTA<sup>®</sup>-GEO-DRAIN Quattro

### Expert combination for permanently dry cellars.

Structural waterproofing plus a four-ply drainage sheet. Fast and safe application straight off the roll.



■ Protection and waterproofing system

■ Drainage

■ For vertical application in building construction

The solution for any problem?

DELTA® system, of course!



■ DELTA®-THENE

Equally suitable for horizontal and vertical application, the DELTA®-THENE system is ideal for waterproofing floor slabs, cellar walls, and pods. Applied safely, swiftly, and economically straight off the roll, its 1.5 mm thick, self-adhesive sheets form a homogenous waterproofing layer of defined uniform thickness that will reliably protect even large surfaces.

■ DELTA®-GEO-DRAIN Quattro

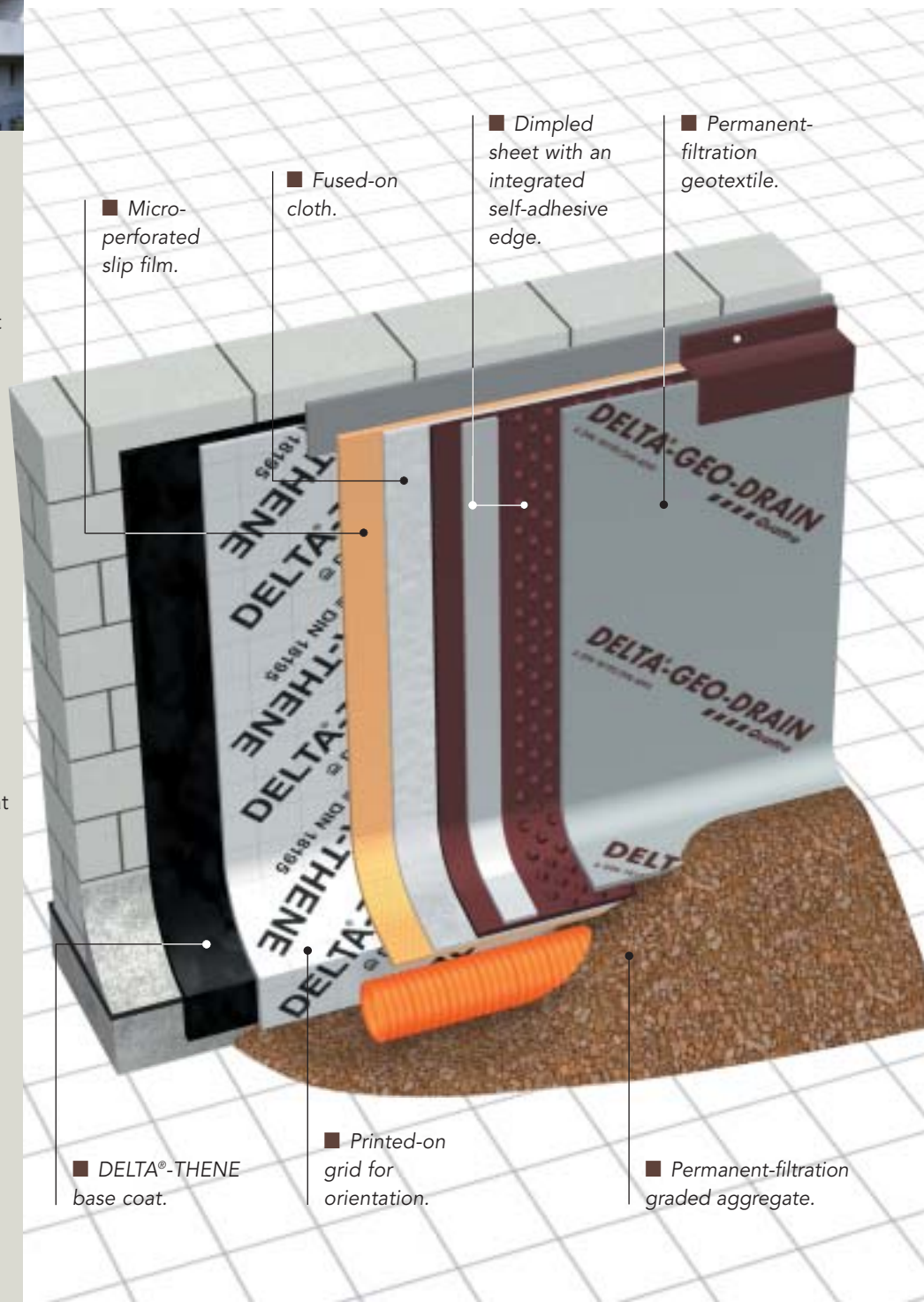
The four-ply protection and drainage system DELTA®-GEO-DRAIN Quattro optimally protects structural waterproofing because its integrated slip film offers a maximum of safety. The system permanently and reliably prevents the transmission of pressure from settling backfill material to the waterproofing coat. Its superior drainage capacity of  $3.1 \times 10^{-3} \text{ m}^2/\text{s}$  at  $20 \text{ kN/m}^2$  ensures that even large volumes of water are safely drained away. What is more, the additional drainage backing safely absorbs any water which may have penetrated, thus protecting the structural waterproofing from hydrostatic pressure. The system is CE certified and conforms to the requirements of EN 13252.

DELTA® Quality Branded Products  
Made by Dörken.

A complete system offering first-rate advantages:

# DELTA®-THENE/DELTA®-GEO-DRAIN

Immediate protection. Compact.



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"Wallpapered" straight off the roll.

DELTA®-NOPPENBAHNEN-PROFIL and DELTA®-GEO-DRAIN CLIP.

Integrated self-adhesive edge for laying precision.

# DELTA®-GEO-DRAIN Quattro

## 4 units. Cost-efficient application.

### DELTA®-THENE ...

- ... may be laid out vertically and horizontally in inside and outside applications.
- ... can be 'wallpapered' on cleanly, quickly, and safely straight off the roll.
- ... will resist water and rain immediately after application as it needs no time to set.
- ... equalises rough spots even on large surfaces because of its defined thickness.
- ... can be cut to size exactly thanks to its imprinted grid.
- ... safely bridges any cracks in the masonry thanks to its flexibility.

### DELTA®-GEO-DRAIN Quattro ...

- ... being a four-ply material forms a compact unit that can be installed swiftly straight off the roll.
- ... features ample safety margins for compensating sheet movements, as well as superior slip performance.
- ... offers high resistance to compression thanks to its special dimple design.
- ... features a disproportionately high drainage capacity.
- ... is absolutely rot-proof.
- ... may be installed at depths of up to 10 m.



DELTA®-GEO-DRAIN Quattro and DELTA®-THENE are designed for swift installation.



## Important installation information.

### DELTA®-THENE ...

... combines a four-ply cross-laminated special HDPE sheet with a waterproofing and adhesive layer of bitumen rubber. May be installed at temperatures as low as -5°C if used in combination with DELTA®-THENE-KÄLTEGRUNDANSTRICH.

### DELTA®-GEO-DRAIN Quattro ...

... consists of four layers. Its micro-perforated slip film distributes any permanent pressure acting on the system. Its fused-on cloth is an impact-absorbing drainage backing. The dimpled sheet drains away water from the entire surface, while the permanent-filtration geotextile keeps the air gap between the dimples from being clogged up with sludge.

In addition, of course, there is our range of perfect accessories.

# DELTA®-THENE

## Technical Data Overview:

Material	Cross-laminated special HDPE sheet with a waterproofing and adhesive layer of bitumen rubber.
Thickness	approx. 1.5 mm
Weight	approx. 1.6 kg/m <sup>2</sup>
Sd-value	approx. 400 m
Service temperature range	-30 °C to +80 °C
Processing temperature range	+5 °C to +30 °C (air and soil) Down to -5 °C with DELTA®-THENE-KÄLTEGRUNDANSTRICH
Roll sizes	1.0 x 20 m/1.0 x 5 m

# DELTA®-GEO-DRAIN Quattro

## Technical Data Overview:

Dimpled sheet material	High-density polyethylene.
Geotextile material	Polypropylene
Dimple height	approx. 9 mm
Compressive strength	approx. 400 kN/m <sup>2</sup>
Air gap between dimples	approx. 7.9 l/m <sup>2</sup>
Service temperature range	-30 °C to +80 °C
Roll size	12.5 m x 2 m
Durability	To be covered within 2 weeks after installation. Will endure for 25 years in natural soil having a pH value between 4 and 9 at a soil temperature of 25 °C max. < 25 °C.
Drainage capacity	3.1 · 10 <sup>-3</sup> m <sup>2</sup> /s (EN ISO 12958) at 20 kN/m <sup>2</sup>

# DELTA®-Accessories for DELTA®-THENE.

## Dörken makes your life easier – systematically.

You are sure to appreciate these handy DELTA®-Accessories:

### DELTA®-THENE-GRUNDANSTRICH

Primer and adhesion promoter for deep penetration of mineral substrates. Complies with the requirements of DIN 18195 as well as with building industry specifications.

### DELTA®-THENE-KÄLTEGRUNDANSTRICH

This special winter primer may be used at temperatures as low as -5°C.

### DELTA®-THENE-BAND T 300

Specially-cut strip (0.3 x 10m) for sealing edges, fillets, outside corners, and pipe sleeves. Features a split non-stick backing for easy application.

### DELTA®-BAND

Bitumen-rubber sealing strip with a powerful self-adhesive effect and an aluminium or lead-coloured surface.

# DELTA®-Accessories for DELTA®-GEO-DRAIN Quattro.

### DELTA®-NOPPEN-BAHNEN-PROFIL

Edge sealing strip.

### DELTA®-HAFTNAGEL

Self-adhesive pin aids installation.

### DELTA®-MS DÜBEL

Plastic nail plug for sheet attachment.

### DELTA®-GEO-DRAIN CLIP

Installation clip for swift and easy fastening.



## DELTA® System ...

# DELTA®

### ... for owners:

"... What I get is a mature problem solution provided at a fair price by a top specialist in quality branded products!"

### ... for workers:

"... What I get is a complete system made by a single manufacturer that enables me to do anything to the owner's entire satisfaction. There is no safer way!"

### ... for planners:

"... I can be certain that both innovative and standard products will be used in implementing my roof and cellar plans in a systematic and forward-looking way."

### ■ Standard requests for tender

for all DELTA®-products may be obtained from [www.doerken.de](http://www.doerken.de) or on a **free CD-ROM**. **Detailed installation instructions** for all DELTA®-products are available on the internet as PDF files for you to print out and save.



# DÖRKEN

Dörken GmbH & Co. KG  
Wetterstrasse 58  
D-58313 Herdecke  
Germany  
Tel: +49 (0) 23 30/63-0  
Fax: +49 (0) 23 30/63-355  
bvf@doerken.de  
[www.doerken.de](http://www.doerken.de)

A company of the Dörken Group.