

**DELTA<sup>®</sup>**

HIGH PERFORMANCE AIR & MOISTURE BARRIERS

**DÖRKEN**

# DELTA<sup>®</sup>

## HIGH PERFORMANCE AIR AND MOISTURE BARRIERS

For Better Protection



# NO ONE KNOWS PROTECTION LIKE WE KNOW PROTECTION.

Dörken Systems Inc. is the North American division of Ewald Dörken AG in Germany. Ewald Dörken AG has been in business since 1892, longer than almost any other building materials company. For more than 125 years, Dörken has been delivering innovative, high-performance air and moisture barriers for both commercial and residential construction, protecting all types of buildings from around the world in the most extreme weather conditions.



## **A commitment to better building.**

We're proud that our DELTA® air and moisture barrier systems support high-performance green buildings. Several of our products have a Health Product Declaration® (HPD), allowing architects designing LEED® buildings to confidently choose DELTA®. HPD helps achieve the LEED® v4 Material Ingredient Reporting credit.



## **A commitment to a sustainable environment.**

Building sustainably includes manufacturing. At Dörken, we do not manufacture products or by-products that have a negative impact on our world. We protect our environment and the people who work with us, while producing high-quality, sustainable products.



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# AIR- AND WATER-RESISTIVE BARRIERS

Air and moisture control are critical to the sustainability and longevity of a building, for both energy efficiency and protection against potential moisture damage. Our above-grade DELTA® barriers meet the highest performance specifications in commercial and residential construction. This means your buildings stay dry, use less energy, and last longer.



## **Commercial Solutions**

As commercial buildings become more energy efficient and are required to meet higher performance standards, air and moisture control in the building envelope is vital. DELTA® delivers the technical support and products to enable architects to specify the best solution for each building.



## **Residential Solutions**

High-performance air and moisture control products protect against expensive moisture damage, while adding energy efficiency and comfort to a home. Our range of innovative DELTA® products will ensure the most suitable product for your specific project.



## DELTA®-VENT SA

100% SEAL EVERY TIME HELPS BUILDINGS STAY DRIER AND LAST LONGER.

Conventional barrier products, like bitumen sheets and sprays, are often vapor impermeable or difficult to apply in field conditions. As a result, they can allow air and water leakage due to uneven application. This can lead to air leakage, increased heating and cooling costs, as well as mold and long-term water damage.

Factory-controlled quality of highly vapor permeable DELTA®-VENT SA, the only air- and water-resistive barrier with a self-adhering edge lap, ensures every building is 100% sealed. With DELTA®-VENT SA, buildings stay drier, save energy, and last longer.

### KEY HIGHLIGHTS:

- Industry-leading vapor permeability (50 perms)
- Lightweight and tear resistant, withstanding the rigors of job sites and weather
- Simple application helps ensure proper installation
- Exceeds stringent requirements of the Air Barrier Association of America (ABAA)
- IBC, IRC (ICC ESR 2932) compliant, meets ICC AC 38, Red List Compliant, DECLARE
- Health Product Declaration® (HPD 2.0) for LEED® 4.0

WATER TIGHT. AIR TIGHT. WEATHER TIGHT.

**Vapor permeance:**  
31 perms; 50 perms

**Roll length:**  
115' (35 m)

**Roll width:**  
4.92' (1.5 m)  
19.5" (50 cm)  
9.75" (25 cm)



## DELTA®-VENT S

ENSURES AN AIR- AND MOISTURE-TIGHT BUILDING.

Improved airtightness helps buildings achieve higher levels of energy efficiency. Standard housewraps, often used to achieve this, are easily damaged. Every staple hole, seam, or wall penetration allows for movement of air, which can lead to unwanted condensation due to temperature differentials across the wall.

DELTA®-VENT S is a mechanically attached, heavy-duty, highly vapor permeable air- and water-resistive barrier that resists the passage of bulk water from wind-driven rain and snow. Its high vapor permeability allows any moisture accumulation within the structure to easily escape via diffusion, leaving your building drier, longer.

### KEY HIGHLIGHTS:

- Allows damaging moisture to escape, creating a healthier building
- Maximizes airtightness, making it ideal for energy-efficient construction
- Matte black color reduces blinding glare during installation
- IBC, IRC (ICC ESR-2932), and NBC (CCMC 13479-R) compliant
- Health Product Declaration® (HPD 2.0) for LEED® 4.0

**Vapor permeance:**  
69 perms; 120 perms

**Roll length:**  
164' (50 m)

**Roll width:**  
4' 11" (1.5 m)





# PROJECT PROFILE

BUDDS' JAGUAR AND LAND ROVER DEALERSHIP

## PROJECT HIGHLIGHTS:

<b>Building Location:</b>	Oakville, Ontario, Canada
<b>Project Size:</b>	80,000 sq. ft.
<b>Project Type:</b>	Automotive Retail Design
<b>Cladding Type:</b>	Alucobond (ACM) Panels
<b>Total Building Value:</b>	\$2.2 Million (CDN)
<b>Featured Product:</b>	DELTA®-VENT SA

Anyone who knows luxury vehicles also knows state-of-the-art sales and service facilities are part of the prestige that comes with them. Budds', a Canadian chain of luxury car dealerships, has taken this tradition to heart for its Jaguar and Land Rover dealership by building a new, fully equipped, premium building that better reflects the quality and luxury for which its imported products are known. Located in Oakville, just west of Toronto, Ontario, the new Budds' Jaguar and Land Rover dealership is an 80,000 sq. ft. building completed in 2018.

### **Both air tight and vapor permeable.**

To create a high-performance wall system that enhances building performance at a premium facility, DELTA®-VENT SA was selected as the go-to product to be used across the entire dealership exterior. The membrane uses industry-leading technology to create a continuous water-, air-, and weather-tight barrier that prevents dangerous moisture from getting into buildings. It also allows moisture that is already in the walls to escape. DELTA®-VENT SA helps eliminate the building enclosure's risk of mold and other problems caused by moisture.



**A healthy, comfortable, and energy-efficient building.**

For Budds' Jaguar and Land Rover dealership, DELTA®-VENT SA's airtight properties will also contribute to a healthy, comfortable, and energy-efficient building, which are priorities for today's building industry. Airtight structures are ones where any unintended gaps in the building envelope are eliminated; gaps that would otherwise cause air and energy leakage in or out of the building.

**Easy, workable, and straightforward.**

The installation team stated that installing DELTA®-VENT SA throughout the Budds' Jaguar and Land Rover dealership was practical, smooth, and quick, particularly given the scale of the project. When moving from one corner to another, installers appreciated the total width and length of each roll as it enhanced the logistics of their workflow. Overall, installing DELTA®-VENT SA on Budds' Jaguar and Land Rover dealership was a seamless success. The team commended the method of getting the product from Dörken's North American facility, where those involved helped move the project forward quickly and without complication.

For more than 40 years, Budds' has developed and maintained a legacy built on high-level, all-encompassing service. Aligning with Budds' testament to quality customer care and reputation, DELTA®-VENT SA will effectively protect this project from the elements well into the future.





# DELTA®-STRATUS SA

EXTREME UV PROTECTION FOR LASTING PERFORMANCE.

UV exposure can destroy the integrity of your building materials, leading to harmful, long-term effects such as air leakage and water ingress. But it's hard to combat something you can't see. And with no industry standard to reference, manufacturer claims are not always what they seem.

Rigorously tested, new DELTA®-STRATUS SA air- and water-resistive barrier is reliably airtight and stands up to the exposure claims it promises. This means you continue to get the performance you need – even during longer construction cycles. Count on lasting building performance you can clearly see.

## KEY HIGHLIGHTS:

- Industry-leading UV protection rigorously tested for real-world conditions
- UV/weather exposure up to 180 days in climate zones 3-8 or up to 150 days in climate zones 1-2
- Four-layer, fully self-adhered WRB and air barrier featuring an innovative UV-resistant acrylic coating
- Simple application helps ensure proper installation
- High vapor permeability (50 perms)

### Vapor permeance:

31 perms; 50 perms

### Roll length:

115' (35 m)

### Roll width:

4' 11" (1.5 m)

19.5" (50 cm)

9.75" (25 cm)



THE ONLY WRB WITH A UNIQUE FOURTH LAYER OF EXTREME UV PROTECTION





## TWO WAYS TO PROTECT YOUR OPEN-JOINT CLADDING STRUCTURES FOR THE WAY YOU BUILD.

Some of the most cutting-edge buildings in the world use open-joint claddings. This does require extra attention to manage rain, wind, and UV light.

Now there is more choice to help you protect your open-joint cladding design. Backed by years of proven performance and research, DELTA®-FASSADE S is a highly UV-resistant WRB that provides you the water, wind, and UV protection for which you're looking. Alternatively, choose DELTA®-FASSADE SA, a self-adhering air- and water-resistive barrier especially designed for open-joint claddings.



## DELTA®-FASSADE S

A HIGH-PERFORMANCE WATER-RESISTIVE BARRIER DESIGNED TO BE INSTALLED IN FRONT OF CONTINUOUS INSULATION.

### KEY HIGHLIGHTS:

- Designed for permanent UV exposure
- Mechanically attached
- Integrates well with most open-joint cladding systems, e.g. Trespa, Swisspearl, Eternit, Fundermax and more
- Available as DELTA®-FASSADE S PLUS with integrated adhesive edge
- IBC and IRC (ICC ESR-2932) compliant

**Vapor permeance:**  
204 perms; 328 perms

**Roll length:**  
164' (50 m)

**Roll width:**  
4' 11" (1.5 m)



THINK OF US AS THE AIR- AND WATER-RESISTIVE BARRIER  
KNOW-IT-ALLS OF OPEN-JOINT CLADDING.



## DELTA®-FASSADE SA

A SELF-ADHERED AIR- AND WATER-RESISTIVE MEMBRANE DESIGNED TO BE INSTALLED ON THE STRUCTURAL SHEATHING.

### KEY HIGHLIGHTS:

- Industry-leading UV protection
- Fully self-adhered water and air barrier; no fasteners required
- Matte black color enhances appearance of open-joint cladding
- Split-release liner for easy application
- Suitable for buildings under IRC, type V-B construction under IBC, and under 40' with no plastic foam insulation under IBC

**Vapor permeance:**  
30 perms; 50 perms

**Roll length:**  
115' (35 m)

**Roll width:**  
4' 11" (1.5 m); 19.5" (50 cm)  
9.75" (25 cm)





# PROJECT PROFILE

CLIPPERSHIP WHARF

## PROJECT HIGHLIGHTS:

<b>Building Location:</b>	Boston, Massachusetts, USA
<b>Project Size:</b>	200,000 sq. ft.
<b>Project Type:</b>	Multifamily
<b>Cladding Type:</b>	Trespa® Meteon®
<b>Total Building Value:</b>	500 units with a selling price between \$500,000 and \$800,000 per unit
<b>Featured Product:</b>	DELTA®-VENT SA and DELTA®-FASSADE S PLUS

Clippership Wharf is built on one of East Boston's most historic wharfs, only steps away from Maverick Square and just minutes from downtown Boston. The 200,000 sq. ft. project is a multifamily, five-story luxury condominium building that will feature restaurants, recreation, and public art—all with views of the Boston skyline.

When the owner of the project, Lendlease, started planning Clippership Wharf, the goal was to create a building that was the first of its kind for Boston Harbor. When building on a harbor, however, there are constant concerns around wind-driven rain and snow and their impact on the construction of the building, as well as the long-term integrity of the building. To overcome these challenges, the owner worked with leading architects at The Architectural Team. The team was committed to ensuring that the building performance and integrity were protected, while maintaining design and aesthetics.

Above all, they needed the right products to keep wind, rain, and moisture out of the system to create high-performance enclosures that will withstand the test of time. Dörken Systems Inc. was the right partner for the job.



### Finding water-resistive barriers that were airtight and vapor permeable.

The exterior of Clippership Wharf incorporated a prefabricated wood frame construction with fire-rated OSB sheathing. This approach, coupled with the city's climate zone and unique location challenges, called for the use of a vapor permeable air- and water-resistive barrier. No matter how moisture entered the system, through construction or intense wind-driven rain and snow, the team needed to be confident that any incidental moisture could escape and not cause serious damage to the building enclosure. For these reasons, the team selected DELTA®-VENT SA and DELTA®-FASSADE S PLUS barriers to protect Clippership Wharf.



#### DELTA®-VENT SA

DELTA®-VENT SA has industry-leading vapor permeability that, when paired with its superior airtight and water-resistive properties, made it the ideal choice for the Clippership Wharf project. DELTA®-VENT SA helps to keep air and water out of the system, while also allowing any trapped moisture to escape, eliminating the risk of rot, mold, and other problems caused by water. For the Clippership Wharf project, this meant DELTA®-VENT SA would help address unique design and location concerns, while helping maintain healthy and comfortable interiors for years to come. Additionally, Dörken was one of the few manufacturers that met the NFPA 285 requirements.

#### DELTA®-FASSADE S PLUS

Clippership Wharf constitutes four buildings, totaling 150,000 sq. ft. of open-joint cladding, and incorporating approximately 10,000 sq. ft. of Trespa® cladding. This unique design element, paired with the climate challenges, called for the use of DELTA®-FASSADE S PLUS.

Open-joint cladding systems require extreme weather protection. If the barrier isn't up for the job, the wall system will fail. DELTA®-FASSADE S PLUS is a breathable, UV-resistant barrier with a front-side adhesive for secure overlaps, specifically designed to provide advanced moisture protection for open-joint cladding systems. Given that the design of Clippership Wharf incorporated a prefabricated wood-frame construction, the decision to use DELTA®-FASSADE S PLUS assured protection from wind-driven rain and snow, with the ability to channel this bulk water to the outside of the structure.

While being highly vapor permeable, DELTA®-FASSADE S PLUS is also extremely durable and tear resistant. The product withstands the rigors of the jobsite, and is tough enough to stand up to the intense wind and weather known to hit the harbor.

### Overcoming construction challenges.

Overall, the installation of DELTA®-VENT SA was a success, and the product's self-adhesive edge lap, which works to ensure airtight overlaps, made it easy and convenient to install. The team also expressed the benefit and value of the accessory components, both DELTA®-MULTI BAND and DELTA®-FLEXX-BAND—which served as critical components to the performance of the assembly. Though it was difficult to install during the winter season, where high winds and wind-driven rain were quite prominent, the challenges were overcome by thorough product knowledge and a team that was well trained to install DELTA®-VENT SA.

## ENGINEERED RAINSCREENS FOR DRAINAGE AND VENTILATION

A rainscreen provides a space for ventilation and drainage behind the cladding. This prevents moisture damage in the enclosure by effectively draining and ventilating water that gets past the cladding to the exterior. Especially in the case of absorptive claddings, like stucco and adhered stone, an engineered rainscreen creates a safety buffer against damage due to solar-driven and incidental moisture.



### DELTA<sup>®</sup>-DRY

HIGH-PERFORMANCE RAINSCREEN SYSTEM KEEPS WALLS DRY.

Without proper ventilation and drainage, moisture can accumulate between the water-resistive barrier and cladding of a building. This issue is particularly evident with absorptive or reservoir claddings.

A rainscreen separates the cladding from the substructure, allowing water that penetrates into the wall to drain and moisture to evaporate. DELTA<sup>®</sup>-DRY is an innovative ventilated rainscreen for complete moisture protection.

#### KEY HIGHLIGHTS:

- Unique 3-dimensional dimple and groove design
- Made of special High-Density Polyethylene (HDPE)
- Ventilated air space allows interior water vapor to escape
- Provides a full capillary break behind the cladding
- Drains bulk water
- ICC compliant (ICC ESR-2987)

#### Roll length:

50' (15.24 m)

#### Roll width:

3' 3" (1.0 m)



### DELTA<sup>®</sup>-DRY STUCCO & STONE

VENTILATED RAINSCREEN FOR ADHERED STONE AND CONVENTIONAL STUCCO CLADDINGS

Absorptive claddings such as stucco and adhered stone increase the risk of solar-driven moisture, which puts wood substrates at high risk of water damage. They require specialized moisture control.

DELTA<sup>®</sup>-DRY STUCCO & STONE is a ventilated rainscreen with a pre-installed mortar screen that reduces scratch coat mortar consumption. Air-gaps on the interior and exterior side of the membrane make it the ideal protection behind adhered stone veneer and conventional stucco.

#### KEY HIGHLIGHTS:

- Specially designed for stucco and stone applications
- Structured membrane provides two-sided exterior and interior drainage
- Stops solar-driven moisture, unlike open-fiber mesh
- Pre-installed mortar screen saves on mortar costs

- ICC compliant (ICC ESR-2987)

Roll length: 46' (14 m)

Roll width: 3' 3" (1.0 m)





# DELTA<sup>®</sup>-DRY & LATH

THE 2-IN-1 RAINSCREEN SOLUTION FOR STUCCO AND STONE APPLICATIONS.

DELTA<sup>®</sup>-DRY & LATH is a new 2-in-1 rainscreen solution that helps protect against mold, rot, and decay by effectively draining and drying, resulting in superior

long-term protection. It has a factory pre-applied fiberglass lath that doesn't corrode. It is easier and safer for installers to handle.

## KEY HIGHLIGHTS:

- Combines proven technology of DELTA<sup>®</sup>-DRY rainscreen with fiberglass lath for a complete system
- Eliminates an entire step from installation, reducing labor costs
- Fiberglass lath meets ICC-ES AC 275
- Meets MVMA requirements
- Meets ASTM E2925-17 (Standard Specification for Manufactured Polymeric Drainage and Ventilation Materials Used to Provide a Rainscreen Function)
- IRC compliant (IAPMO ER 323)

DELTA<sup>®</sup>-DRY RAINSCREEN  
+ PRE-INSTALLED FIBERGLASS LATH

## DELTA<sup>®</sup>-DRY & LATH

### Roll length:

46' (14 m)

### Roll width:

3' 3" (1.0 m)



# PROJECT PROFILE

LOCKHART FIRE STATION HEADQUARTERS

## PROJECT HIGHLIGHTS:

<b>Building Location:</b>	Lockhart, Texas, USA
<b>Project Size:</b>	2,700 sq. ft.
<b>Project Type:</b>	Municipal Fire Station
<b>Cladding Type:</b>	Stucco
<b>Total Building Value:</b>	\$850,000 (USD)
<b>Featured Product:</b>	DELTA <sup>®</sup> -DRY & LATH, DELTA <sup>®</sup> -VENT SA



A fire station is an icon of safety, part of the community, and central to everyday life. Recognizing the need to create a building that symbolized these values through design and performance was the driver behind the newly designed and rebuilt Lockhart Fire Rescue Headquarters in Lockhart, Texas. Designed by Studio Steinbomer and built by Countywide Builders.

**Both air tight and vapor permeable.**

The exterior of the Fire Station is made up of stucco cladding – a design element that can be resistant to fire, rot, mold, impact, and termite infestation for as long as 100 years if properly installed. This design required a durable building envelope that could withstand a notoriously hot and humid climate in Texas – with a focus on air tightness and vapor permeability.

Better building performance depends largely on the building materials used. Using industry-leading technology, DELTA®-VENT SA creates a continuous water-, air-, and weather-tight barrier while staying highly permeable, so the building stays dry and lasts longer.

**Preventing solar-driven moisture.**

The advantage of having a vapor permeable wall assembly is that it allows the system to dry out when moisture gets into the wall assembly. A ventilated rainscreen prevents moisture intrusion from solar-driven moisture by separating (or decoupling) the absorptive cladding from the vapor permeable air barrier.

Designed with applicators in mind, DELTA®-VENT SA comes fully adhered for simple and straightforward application. With the self-adhesive edge-lap feature, ensuring an airtight overlap is easier and more secure than ever. The matte gray color also helps to reduce irritating glare during installation under the harsh Texas sun.

**The 2-in-1 solution for long-term durability.**

Winn Smith of Countywide Builders noted that using high-quality, durable materials was important to him because at the end of the day, he knows that he's responsible for the building's long-term integrity. To create a high-performance wall system that enhances building performance, DELTA®-DRY & LATH was selected to be used in front of DELTA®-VENT SA, across the entire headquarters exterior. Stucco is a great cladding, but applying it directly to any water-resistive barrier creates the risk of moisture retention, solar-driven moisture, and rot.

DELTA®-DRY & LATH is a 2-in-1 product that combines the proven technology of the DELTA®-DRY rainscreen with an innovative fiberglass lath for a complete, one-step moisture control and lath system. By combining these two critical components, an entire step is eliminated from the construction process, providing easier and safer handling for the installer. The alkali-resistant glass lath is not affected by chemicals and will not corrode.

**Air-gap Technology helps a building last for years.**

Simplifying many steps, the ventilated rainscreen will help to eliminate the building enclosure's risk of solar-driven moisture before it can do any damage. At the same time, this one-step moisture control and lath system allows any incidental moisture from within the wall to dry to the outside.

An air gap between the stucco and the substrates creates an air space between the cladding and the rest of the wall. This gap provides two important functions; one is to allow outward drying through a vapor-open water- and air-control layer, and the second is to prevent inward wetting as a result of moisture coming through a reservoir cladding.

Without breaking the bond between commonly used housewraps and cementitious stucco that can act as a surfactant, stucco cladding systems will continue to fail. But with the right kind of air gap, stucco will last hundreds of years.

Unlike traditional methods proven ineffective, the fire station's exterior cladding is efficiently uncoupled from the rest of the assembly, thereby giving it longevity and durability. Getting ahead of water and dampness is the only way to ensure new stucco and manufactured stone buildings live up to their full potential.



# DELTA®-TRELA

VAPOR PERMEABLE PROTECTION FOR METAL ROOFS AND CLADDING.

Metal roofs and cladding are not sealed to the roof deck or sheathing, allowing moisture to get in easily. If moisture accumulates, there can be premature damage to the roof substructure, and condensation on the underside of the metal can lead to corrosion – requiring the metal to be replaced sooner than expected.

DELTA®-TRELA is a vapor permeable underlayment with structured separation and drainage – specifically designed for metal roofs and façades with metal cladding. It helps prevent corrosion and moisture accumulation underneath panels and ensures the longevity of your metal roof.

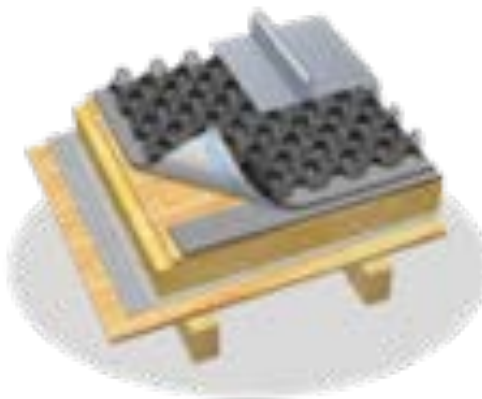
## KEY HIGHLIGHTS:

- 8mm studded fiber mat ventilates the underside of the metal panels
- Vapor permeable, watertight membrane allows moisture within the roof cavity to escape via diffusion
- Noise reduction from rain or hail by up to 15dB

**Vapor permeance:**  
120 perms

**Roll length:**  
98' (30 m)

**Roll width:**  
3'3" (1.0 m)





# DELTA® ACCESSORIES

FOR AIR- AND WATER-RESISTIVE BARRIERS.

Air- and water-resistive barriers are critically important to the moisture management of building enclosures. Our comprehensive line of DELTA® accessories ensures an installation that performs.

## **DELTA®-MULTI-BAND**

Pure acrylic adhesive tape used at overlaps of DELTA® air & water- resistive barriers.

## **DELTA®-FLEXX-BAND**

Stretchable butyl rubber tape used at penetrations.

## **DELTA®-FAS CORNER**

Preformed to make corners in window and door openings air and watertight.

## **DELTA®-TILAXX**

High-performance adhesive and sealant specifically designed for use with all DELTA® air-, vapor-, and water- resistive barriers.

## **DELTA®-FLASHING**

Used to seal openings for windows and doors to complete the DELTA® air & WRB system.

## **DELTA®-FASSADE FLASHING**

Self-adhering flashing with UV-resistant coating for use with DELTA®-FASSADE S water-resistive barrier.

## **DELTA®-TW FLASHING**

A premium, durable, self-adhering flashing designed for through-wall applications. It adheres tenaciously to seal the interface between common building substrates, including lintels and brick ledges, and to all DELTA® air- and water-resistive barrier membranes.

## **DELTA®-FASSADE TAPE**

UV-resistant seam tape for use with DELTA®-FASSADE S water-resistive barrier.



## **DELTA®-HF PRIMER**

A solvent-free primer for most construction substrates.

## **DELTA®-ADHESIVE LVC**

An emulsion, rubber-based adhesive. It is a surface preparation that increases bond strength of self-adhering membranes.

## **DELTA®-ADHESIVE**

A high solvent emulsion, rubber-based adhesive. It is a surface preparation that increases bond strength of self-adhering membranes.

## **DELTA®-BUGSCREEN**

Resists insects while allowing full drainage and ventilation.



# FOUNDATION PRODUCTS

Keeping your foundation dry is important to building longevity. Moisture infiltration is the biggest problem in most basements. Proper foundation protection and drainage will keep the building's structure sound, and allow for a dry, mold-free environment.

Our DELTA® foundation products provide best-in-class performance in both commercial and residential construction. Our moisture-control products will keep your building dry and comfortable.



# DELTA<sup>®</sup>-MS

KEEPS BASEMENTS DRY AND COMFORTABLE.

Today's basements are bright, open-concept living spaces; an extension of the home. When basements are built to simply meet building code requirements, they can often become damp and moldy due to unwanted moisture.

DELTA<sup>®</sup>-MS is a dimple sheet that reliably keeps moisture away from foundation walls. Our exclusive Air-gap Technology allows incidental moisture that creeps in to drain down to the perimeter drain. The result is a basement that stays dry, feels more comfortable, and lasts longer.

## KEY HIGHLIGHTS:

- Dimple sheet provides capillary break
- Air-gap Technology allows incidental water to drain down freely
- Helps prevent interior dampness and musty odors
- Unlike asphaltic sprays, reliably bridges foundation cracks
- Keeps soil moisture away from foundation
- Installs easily in all types of weather
- Compliant with IRC and IBC (ICC-ESR-2303) and NBC (12788-R Drainage and 12658-R Dampproofing)

### Vapor permeance:

0.3 perms

### Roll length:

65' 7" (20 m)

### Roll width:

3' 6" (1.07 m)

5' (1.52 m)

6' (1.83 m)

6' 7" (2.00 m)

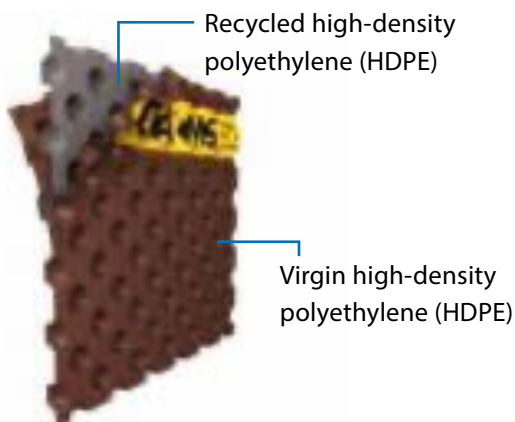
7' (2.13 m)

8' (2.45 m)

9' 10" (3.00 m)

THE MOST DURABLE DIMPLE SHEET ON THE MARKET

MADE FROM HIGH-DENSITY POLYETHYLENE – 60% RECYCLED AND 40% VIRGIN.





## CASE STUDY

BILL HOFFMAN



Bill Hoffman has spent over 20 years in the business of foundation moisture protection in the mid-Atlantic region of the United States. Starting out as a salesman, he grew his career and eventually purchased the company for which he worked. Now, Bill is leading the way for a paradigm shift in the basement business. His company, Elite National Water Management, LLC (operating as National/American Water Management), protects over 2,000 foundations a year for the biggest builders in the United States.

### **Minimum code is minimum value.**

The 1990s were a build-to-code-only market. Builders' top concerns were to save time and money. And when it came to foundation protection, most builders were dampproofing either by spray or roller. This coating may repel some moisture, but not bulk water.

As Bill and his sales team continued to gain experience with the builder market, a need for better basement protection became evident. At that time, Bill's company installed polymer-modified asphalt spray emulsions that were code approved for waterproofing. Despite the expert experience of his crew, the spray emulsions revealed limitations. When Bill asked for manufacturer warranty support, it was hard to come by. In fact, Bill's company was audited by the manufacturer because they believed his applicators must be applying the spray incorrectly. After the audit, however, it was proven that application was not the problem.

Any poured concrete or block foundation can develop cracks as the house settles, typically from 1/16 to 1/4 of an inch wide. A spray emulsion product may bridge small cracks up to 1/16 of an inch. With cracks greater than that, the cured spray emulsion cannot bridge the space, so the foundation leaks. This leads to moisture behind drywall, wet carpets, mold, mildew, and all sorts of unpleasant situations for the homeowner.

Bill was getting dozens and dozens of call-backs a year due to leaky sprayed foundations. Many of these issues resulted in back charges and very unpleasant conversations with builders and homeowners.

Modern homeowners are using their basements as an extended part of their daily living spaces. They have workout rooms, studios, bedrooms, and even home theaters in what was once often viewed as a dark and dingy place. To protect the homeowner's basement, along with his own reputation, Bill's goal became to convert builders from minimum to high-performance moisture protection by using a dimpled membrane system in place of the spray emulsion.

“ SUCCESS, FOR US, IS NOT GETTING  
A CALL-BACK FROM HOMEOWNERS. ”

Bill Hoffman

Bill says that switching to the dimpled membrane system took the crack issue out of the equation and made sure that homeowners don't have leaks. Elite National Water Management now consistently approaches builders to present the dimpled membrane system as a better option, and the prevalence of giving homeowners the most reliable moisture protection system is seeing a steady rise in the building industry.

**Today, they don't worry about call-backs.**

Instead, Bill gets calls asking what he is using and how to get it. His choice is DELTA®-MS by Dörken, a dimpled air-gap membrane. Bill says it is designed for high-performance moisture protection, and he sells it as an upgrade over spray emulsion. Elite National Water Management has adopted a category shift to the DELTA®-MS dimpled membrane and has seen a huge amount of success. Bill says he can tell a homeowner that if Elite National Water Management is protecting their basement from water, they will not have moisture issues.

**Staying on time and on budget.**

Not worrying about the weather is yet another advantage to using a dimpled membrane like DELTA®-MS instead of a spray-applied product. You must be careful when you install the fluid-applied emulsion because the material cannot be installed in rainy or cold conditions. Applicators can't spray below freezing, and days of work are limited to good weather. When an installer is limited to above-freezing temperatures or days without rain or wet conditions, crews cannot work, which is time and money to both the installer and his builder clients. Spray emulsions require a certain amount of drying time to cure. If it rains within that time, the foundation might need to be sprayed again. DELTA®-MS can be installed in most any weather – which means a contractor (and ultimately the builder) can maintain construction schedules regardless of a little rain or an impending storm.

**A Top-5 construction technique to change everything.**

Elite National Water Management is finding ways every day to improve its schedules. By using DELTA®-MS dimpled membrane, the company is saving costs and finding schedule efficiencies for the short and long term with its clients. Bill says he saves thousands of dollars on out-of-pocket labor and materials costs because of fewer call-backs and warranty issues. Moreover, builders save countless dollars by adhering to their construction schedules and keeping homeowners happy and loyal customers.



“ WE DIDN'T WANT THE BUILDERS WE INSTALL FOR TO BE KNOWN AS THE ONES WITH LEAKY BASEMENTS. ”

Bill Hoffman, President, Elite National Water Management



## DELTA®-DRAIN

THE DIRECT ROUTE FOR RE-DIRECTED GROUND WATER.

Without a proper drainage system, water can damage virtually any construction project. DELTA®-DRAIN provides superior drainage in areas with excess ground water (e.g hillside construction) to help keep basements reliably dry.

DELTA®-DRAIN is a highly effective drainboard that controls the flow of below-grade water. Its high water-flow capacity ensures effective drainage.



### KEY HIGHLIGHTS:

- Drains water away from foundation walls
- High drainage capability prevents build-up of hydrostatic pressure
- Special geotextile will not rot and prevents clogging of drainage passages
- Suitable for almost any application in residential and light commercial construction
- Compliant with NBC (CCMC 13209-R)

**Roll length:**  
65' 7" (20 m)

**Roll width:**  
6' (1.83 m)  
8' (2.45 m)



## DELTA®-FOOTING BARRIER

THE CAPILLARY BREAK MEMBRANE FOR FOOTINGS.

Capillary rise through footings is a major problem if foundation perimeter walls are finished or insulated on the interior. The footings are in constant contact with wet soil. This can transport moisture from the footings up into the bottom part of the wall. Vapor diffusion can continue to carry this moisture into interior wall cavities where it can cause mold and rot.

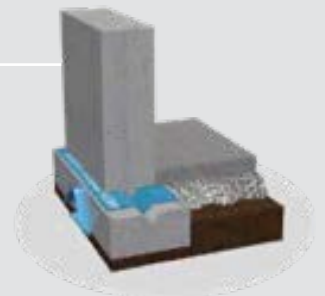
DELTA®-FOOTING BARRIER acts as a physical barrier and capillary break between the footing and the foundation wall, resisting the capillary wicking of water and upward migration of moisture from the footings into the foundation wall.

### KEY HIGHLIGHTS:

- Resists capillary rise of moisture in foundations
- Installs easily between footing and basement wall
- Flexible membrane for convenient forming of keyway
- Ideal for fully insulated basements

**Roll length:**  
82' (25 m)

**Roll width:**  
18" (45 cm)





## DELTA® ACCESSORIES

FOR FOUNDATION PRODUCTS.

DELTA® accessories are designed to work with DELTA® foundation protection and drainage products to ensure trouble-free installations that keep basements dry over the long term.

### DELTA®-FAST'ner

A multistud fastener for secure attachment of DELTA®-MS.



### DELTA®-FLASH

An angled flashing used at top of flat tab.



### DELTA®-MOLD STRIP

Molding used around window cut-outs and at grade level/changes.



### DELTA®-SEALANT

An elastic sealing compound used at overlaps and penetrations.



# 125+ YEARS OF HELPING PEOPLE PROTECT THEIR BUILDINGS.

We've had over a century of experience protecting buildings from the most extreme weather conditions imaginable. This proven performance all over the world is, however, just part of the story. As a true solutions provider, our goal is to ensure you select the right product for your building project. We do this by ensuring you have the tools you need.

## INDUSTRY-LEADING TECHNICAL RESOURCES

When you choose a DELTA® product, you also choose the support and resources you need to ensure your building is protected for years to come. That's why we offer a Certified Installer training program, the best technical manuals in the industry, and comprehensive installation videos.



### A HIGHER DEGREE OF PROTECTION

From CEU courses to industry expert videos, our DELTA® Academy draws on the latest academic research and years of global experience to offer a variety of accessible and convenient learning experiences that provide you with the know-how to build to a higher standard.

### DELTA® INSIGHTS KEEPING YOU INFORMED

Keep up to date with the new building techniques and changes to the building code with the latest blogs, case studies, and articles from our network of industry experts.



### CERTIFIED FOR A HIGHER STANDARD

At the core of our progressive integrated management system is our commitment to quality. We manufacture according to ISO 9001:2015 standards. It enables us to balance our demands of quality, safety, and environmental protection.

# DELTA®



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



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