

Dear Dave

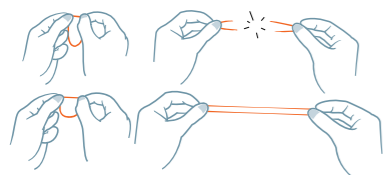


Q: I have been told I need to always install bond breakers when waterproofing. Is it really so important?

A: Yes. Adequate coat thickness and proper bond breakers are the two most important things when installing waterproofing membranes.

Bond breakers allow the membrane to stretch more. This allows it to accommodate the expected movement at wall/floor and wall/wall junctions as well as at installed movement and expansion joints.

It can be thought of like an elastic band:



The longer the length of "elastic" the more it can stretch before snapping.

What would happen if bond breakers are not done properly?

If the bond breakers are not installed correctly there is a very high risk of the membrane tearing and leaking.

So how does the bond breaker work?

It works by letting the membrane de-bond and stretch more.

Figure 1. Without Bond Breaker

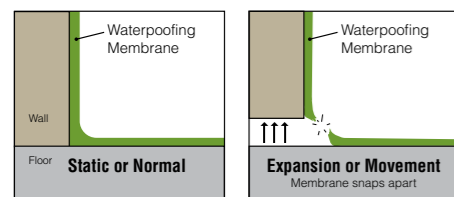
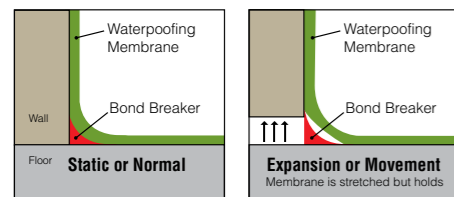


Figure 2. With Bond Breaker



This also means that different membranes have different bond breaker requirements. The more a membrane can stretch before breaking, the narrower the required bond breaker.

Membrane class (and example)	Elongation	Minimum bond breaker
Class I (Dampflex)	<60%	75mm (and backing rod)
Class II (Dampflex Reo)	60 to 300%	35mm
Class III (K10 Plus)	>300%	12mm

Should I always use mesh to give it more strength in these areas?

No. Only ever use mesh, bandage or other types of "reinforcement" when the packaging specifically says you should. Many modern membranes (such as K10 Plus and Dampflex Reo) are designed to be used without mesh.

Using mesh or bandage can actually reduce the performance of a membrane and can lead directly to failures.

For example: using a mesh or bandage with K10 Plus can reduce its elongation from around 600% (class III) to less than 300% (Class I or II). Trapped bubbles in the mesh can also be a big problem. Never use mesh with K10 Plus!

Understanding bond breakers is an important step in reducing potential problems. If more information is needed please call our Technical Advice Line on 1800 653 347.

Happy Waterproofing!

Dave

Do you have a question for Dave? Or maybe some feedback on Dave's Diary? You can contact Dave via email marketing@davco.com.au, fax to (02) 9725 5551.

All feedback is most welcome.

New Davco Distributor In New Zealand



Davco welcomes Jacobsen Creative Surfaces, who joined the Davco Team in March as our new distributors throughout New Zealand. Established in 1962, Jacobsen's has built a solid reputation for delivering the best flooring products and is currently the nation's largest flooring distributors. With showrooms, branch offices and warehouses in the main hubs of Auckland, Wellington and Christchurch, Jacobsen Creative Surfaces prides itself on providing superior service, advice and product solutions through its dedicated and long-standing staff. This strategic alliance will undoubtedly enhance Jacobsen's range of excellent products while promoting Davco as a leading brand in the New Zealand Market.

Welcome to the Team - we look forward to a long, successful and mutually prosperous partnership!

Davco Dave's Diary



Martha Cove calls on Davco for no-doubt-grout

Situated on Victoria's Mornington Peninsula just an hour's drive from Melbourne is the luxurious new 91 hectare development of Martha Cove. This master-planned estate, worth \$650 million, is set to provide the ultimate in beachside luxury living with 1,150 residential dwellings, 600 marina berths, 200 dry berths, commercial and retail precincts, and tourist accommodation... and that's a lot of tiles, which means a lot of grout.

Contracted by Martha Cove's developers Marina Cove Pty Ltd,

Hickory Developments has chosen Davco to provide the reliable high quality tiling solutions required for the prestigious multi-million dollar development. Products selected include:

Davco K10 Plus - a quick-drying, flexible, polyurethane, waterproofing membrane that is UV stable and foot trafficable.

Powder Mastic - a white, premium-grade, cement-based adhesive designed to resist shrinkage and provide superior coverage with smoother and easier application.

Sanitized® Superfine White Grout - suitable for use with most types of ceramic tiles and natural stone applications and containing biocide for greater resistance to a broad spectrum of moulds and bacteria.

Sanitized® Colorgrout - cementitious grout that provides resistance to a broad spectrum of moulds and bacteria and is suitable for internal or external walls, floor grouting applications, inside swimming pools and wet areas.

Scope of work:

91 ha, \$650 million, master planned development in Victoria.

Products used:

- Davco K10 Plus
- Powder Mastic
- Sanitized® Superfine White Grout
- Sanitized® Colorgrout

If you have a project utilising any of Davco's products and would like it featured in our next newsletter please send the details to marketing@davco.com.au.

Welcome to the Autumn edition of Dave's Diary. We hope you find the content informative and useful.

Kind regards,

Dave

Davco Dave.

In This Issue

- Martha Cove Development
- Waterproofing Membrane Technology
- Jacobsen's, our newest distributors
- Sydney Children's Hospital



If you wish to be removed from the Dave's Diary mailing list or know someone who would like to receive a copy, please let us know by emailing marketing@davco.com.au or fax (02) 9725 5551.



Waterproofing Membrane Technology:

The Davco Research and Development Laboratory is at the forefront of waterproofing membrane designs and technologies. We are constantly looking at new polymers and technologies to see how we can make high performance, easy to use products.

The current K10 Plus formulation was developed by Davco in Australia. This formulation is now used in several countries including Australia, China, New Zealand, and USA. Variants are also sold in Thailand, Hong Kong, Malaysia and Singapore.

As any of you who have used K10 Plus know, its popularity is not only due to the fact that it has excellent performance but because it is easy to apply and feels silky and smooth when applied.

The Ideal Membrane

So what properties do we look for when designing a membrane? Waterproofing membranes would ideally:

- Protect the surface from moisture (water and water vapour)
- Stretch a lot before breaking (also called elongation)
- Dry quickly through the whole layer
- Dry without being stressed
- Allow for easy adhesion (e.g covered with tiles)
- Have high resistance (abrasion and chemical)
- Be easy to apply
- Achieve a pin-hole and defect free film
- Be safe to handle and non-hazardous (often used in confined spaces)
- Be cost effective

In reality all of these points can't be done by just one product. But, current technologies have let us come very close. In the future we will get even closer.

Materials

Recent focus has been on two types of material: acrylics and polyurethanes.

Some general differences include:

	Acrylic	Polyurethane (PU)
Properties	<p>Pure polymer Tensile Strength ~0.7 – 2.5 MPa Elongation 600 – 1000%</p> <p>End product Tensile Strength ~0.7 – 2 MPa Elongation ~350 – 450%</p>	<p>Pure polymer Tensile Strength ~20 – 50MPa Elongation ~600 – 1000%</p> <p>End Product Tensile Strength ~8 – 12MPa Elongation ~400 – 700%</p>
Advantages	<ul style="list-style-type: none"> • Chemical durability • External durability • Easily bonded to • Water based 	<ul style="list-style-type: none"> • Rapid through-dry • May be applied in one coat (100% PU) • Early mechanical strength, development (1 day) • Trafficable
Disadvantages	<ul style="list-style-type: none"> • Slow dry through • Late mechanical strength, development (21 days) • Needs two coats • Non-trafficable 	<ul style="list-style-type: none"> • Low resistance to some key chemicals • Difficult to bond to 100% PU • Components for solvent based systems

Current Technology

Recent success with water based polyurethanes has led to the development of new technology based products such as K10 Plus.

The advantages of this material include:

- Fast in-service times (rapid cure and early strength)
- Even and complete drying (it doesn't skin)
- Able to be applied directly across a bond breaker
- Used without additional reinforcement
- Very smooth and "silky" feel when being applied
- Can withstand foot traffic
- Water-based
- Non-toxic
- Fully bondable (can be tiled, covered or re-coated any time after cure)

Basically – K10 Plus was designed by our chemists to be very elastic and strong but also very easy to use.

You also need to consider a few other points when using water based products. They will always be more prone to pin-holing and so need two coats as well as a primer. The drying properties are also temperature and humidity dependant. But, these issues may also apply to pure polyurethane systems. Clear advantages for water based systems include that they are far more tolerant of moisture in the surface and they are non-hazardous. Also, K10 Plus is infinitely bondable. This means it can be tiled, re-coated or repaired at any time after it is installed

What's next?

Products like K10 Plus will probably

eventually replace the older generation technologies. There are a few other technologies we are currently looking at. Some are just too expensive to be practical and others still need some research and development. However, we have an excellent knowledge of the science behind these technologies and there will be some exciting developments to look forward to in the coming years. K10 is just the beginning, the future is bright.

Davco K10 Plus: At the forefront of current waterproofing technologies

Highest Classification when tested to AS/NZS 4858-2004 – Wet Area Membranes (Class III)

Can be used on decks, balconies, roofs and in bathrooms.

Can be tiled or left exposed.

- ✓ Water based
- ✓ Internal or external area waterproofing
- ✓ UV stable
- ✓ Very easy to apply and install
- ✓ Smooth rheology (flow) and application characteristics
- ✓ Very high elongation before break
- ✓ Suitable for light foot traffic
- ✓ Able to be recoated indefinitely
- ✓ Used without additional reinforcement
- ✓ Quick cure and recoat time
- ✓ Available in Grey and Green



Branco with Donna Dullunto of the Sydney Children's Hospital and one of her patients

Davco & Sydney Children's Hospital

Davco has been a supporter of the Oncology Clinic at Westmead Children's Hospital for the past two years.

The company has been providing the red, insulated bags and caps to new patients at the clinic. The bags allow many of the families the ability to transport the medication that requires refrigeration, in a compact way.

This all began through Davco's Customer Service Manager, Branco Fabjancic's association with the hospital.

His daughter, Isabella, has been a patient at the hospital for the past 7 & 1/2 years. Branco and his family are grateful for the wonderful care Isabella has received and have been witness to all the great work the hospital does.

The bags have been very well received by the families at the clinic and the hospital has now made the bags and caps part of the pack that is provided to all new patients at the clinic.

Davco is pleased to have been able to offer this support to such a worthy cause.



Staff Corner Brian Powley

National Sales Manager,
Technical Mortars

Brian joined Davco Australia on the 8th January 2007. Brian was born and educated in Sydney and has many years experience in the Construction industry. In particular, he has over 15 years experience in the flooring market.

Product Update

Introducing...



... the subtle and sophisticated new colours added to the Santized Colourgrout range. You get more choice with Davco!

