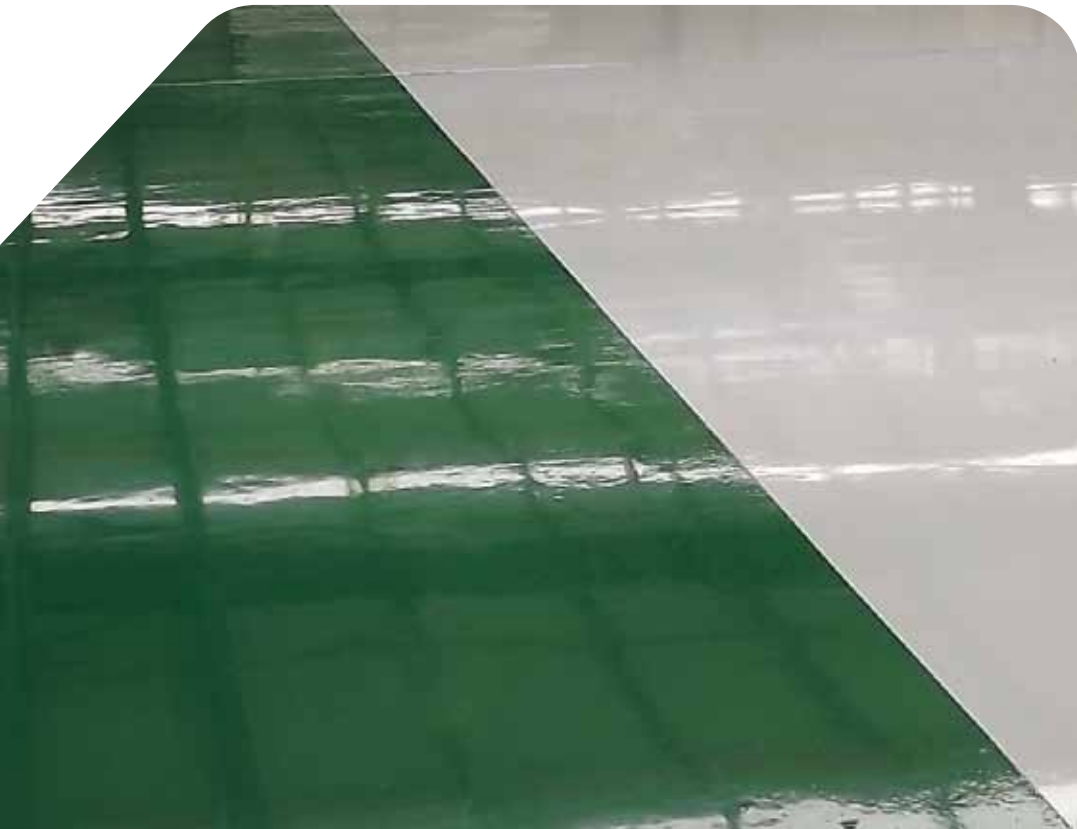


FLOOR COATINGS GUIDE

Engineered Protective
Coating Systems for
Commercial and
Industrial Floors



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ACKNOWLEDGEMENTS
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DISCLAIMER
The information in this book is offered free of charge as a guide to aid product selection and application. It should not be taken as a substitute for technical and safety information presented in product specific Technical Data Sheets and Material Safety Data Sheets which are available through accredited A&I Coatings distributors. Since the final use and application of the products presented herein is beyond our control we cannot be held responsible for product field performance or liabilities arising from misapplication.

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about us



“ Since 1981, A&I Coatings have developed and manufactured premium, customised coating systems for use across high end commercial and industrial applications.

” Our Commitment to Quality and the Environment

Now with more than 30 years experience A&I Coatings produces fit-for-purpose flooring systems which incorporates the latest technology in two pack water based epoxies, polyurethanes and fluoropolymers.

Now a fully certified ISO 9001 -2008 company and committed to environmental sustainability, A&I Coatings confidently responds to the most daunting challenges and fulfils the most complex requirements.

As a longstanding, reputable, Australian owned family business, A&I Coatings has consistently maintained a steadfast commitment to premium quality and is accustomed to engineering protective systems to meet specific needs.

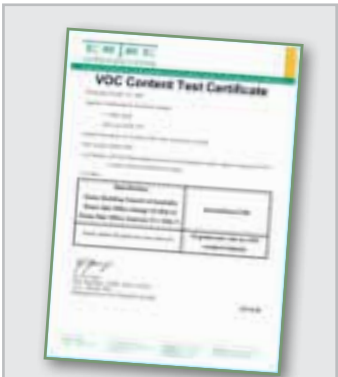
Research and development at A&I involves extensive practical testing in a multitude of applications to validate products according to the most stringent standards.

The demand for ever increasing environmental responsibility has prompted the development of a host of low VOC coatings for many applications and A&I has enthusiastically participated.

The Envirothane range of low VOC floor coatings is now fulfilling a wide range of demanding flooring requirements for large commercial and industrial complexes such as factories, warehouses and car parks.

Designers, developers and applicators can rest assured that the high performance of the Envirothane coating systems is accompanied by low odour and safe application.

The friendly team at A&I Coatings are eager to help with specifications, samples, low VOC certificates for GreenStar projects and advice regarding the best systems for meeting specific requirements.



TYPICAL LOW VOC CERTIFICATE

Quick contact information:
Telephone 1800 819 585
Email helpdesk@aicoatings.com
Web www.aicoatings.com

ATTRIBUTES ➔	CLEAR	COLOUR	SATIN	GLOSS	ROLLER	SPRAY	TROWEL	FOOD GRADE	INT/EXT	WEAR SUITABILITY	CHEMICAL RESISTANCE	REC. SPREAD RATE M²/L	µm DFT PER COAT	RECOAT TIME	SOLIDS CONTENT %
Envirothane 2000	✓		✓	✓	✓	✓		✓	Int	Medium-heavy	Very Good	8	55	4 - 6 hrs	46
Envirothane 2050	✓		✓	✓	✓	✓		✓	Int	Medium-heavy	Good	10 - 15	20 - 30	4 - 6 hrs	30
Envirothane 2100		✓	✓		✓	✓		✓	Int	Medium-heavy	Good	6 - 10	40 - 60	4 - 6 hrs	37
Envirothane 2200		✓		✓	✓	✓		✓	Int	Medium-heavy	Good	4.5 - 6	75 - 100	4 - 6 hrs	47
Envirothane 4111	✓			✓	✓	✓	✓	✓	Int	Very heavy	Excellent	10	100	16 hrs +	100
Envirothane 4110		✓		✓	✓	✓	✓	✓	Int	Very heavy	Excellent	3 - 6	150 +	16 hrs +	100
Envirothane 8470	✓	✓	✓		✓	✓		✓	Both	Medium-heavy	Very Good	6 - 9	50 - 75	4 hrs	45
Envirothane 8476	✓	✓	✓	✓	✓	✓		✓	Both	Medium-heavy	Very Good	5 - 10	40 - 100	2 - 8 hrs	42 - 50
Vitrathane 410		✓	✓	✓	✓	✓	✓		Int	Very heavy	Excellent	4 - 6	150 - 200	16 hrs	85
Vitrethane 638	✓		✓	✓	✓	✓			Both	Heavy	Excellent	5 - 8	60 - 110	16 hrs	57
Tredgrip		✓	✓		✓				Both	Light-medium	Good	6	100	2 - 4 hrs	65
Tredrock		✓	✓		✓			✓	Both	Medium	Good	3	175	1 hr	70
Tredseal	✓		✓	✓	✓	✓		✓	Both	Medium	Very Good	5 - 10	25 - 45	1 hr	24
Tredprime	✓		✓		✓	✓		✓	Both	N/A	N/A	5	15 - 20	1 hr	10

TWO PACK WATER BASED
SUPER CLEAR EPOXY COATING
Gloss or Satin Finish

envirothane 2000



TWO PACK WATER BASED CLEAR
EPOXY WAREHOUSE SEALER
Gloss or Satin Finish

envirothane 2050



“ Envirothane 2000 achieves a beautiful hardwearing ‘polished concrete’ look at a fraction of the cost and time of traditional processes. ”

ENVIROTHANE 2000

Super Clear Epoxy Coating

This extra clear epoxy is a very versatile coating which features good penetration when applied as a primer and is excellent for enhancing colours in substrates such as exposed aggregate on diamond honed concrete floors. Envirothane 2000 is easy and safe to apply and provides excellent aesthetic enhancement, cleanability and protection for floors in a multitude of applications. Anti-slip media can be used with Envirothane 2000 to achieve various safety ratings and low VOC certification is available for GreenStar projects. Envirothane 2000 is a very popular finishing topcoat for coloured and decorative bases such as flake floors. While Envirothane is typically used for medium wear applications due to its low viscosity, extra durability can be achieved for higher traffic areas by applying additional topcoats.

Key Features

- 1 Suitable as primer and top coat
- 2 Safe and easy application
- 3 Extra clear finish
- 4 Suitable for use with anti-slip media
- 5 Enviro-friendly
- 6 Chemical resistant
- 7 Available in satin and gloss
- 8 Easy to clean and maintain
- 9 Compatible with line marking

Typical Use Areas

- 1 Showrooms
- 2 Entrance lobbies
- 3 Schools
- 4 Supermarkets
- 5 Food prep areas and canteens
- 6 Storage areas
- 7 Workshops and laboratories

“ Envirothane 2050 can be thinned down substantially with water to provide very economical yet effective sealing of large slabs with the enviro-friendly benefit. ”

ENVIROTHANE 2050

Clear Epoxy Warehouse Sealer

Envirothane 2050 is a clear water based two pack epoxy concrete slab sealer which is designed to be thinned down with water and applied as a penetrating long lasting dust sealer and stainproof. Envirothane 2050 can be thinned down substantially for economical sealing of large warehouse and car park slabs where easy-to-clean requirements are paramount. Its excellent penetration also makes it a popular primer for heavy duty epoxy and polyurethane topcoats. Envirothane 2050 is easy and safe to apply and low VOC certification is available for GreenStar projects. Extra wear for higher traffic areas can be achieved by applying further topcoats - e.g. car park turning areas.

Key Features

- 1 Dust sealing
- 2 Stain proofing
- 3 Easy to clean and maintain
- 4 Suitable primer for many topcoats
- 5 Can be used with anti-slip media
- 6 Safe and easy application
- 7 Clear gloss or satin finish
- 8 Enviro-friendly
- 9 Compatible with line marking

Typical Use Areas

- 1 Car parks
- 2 Warehouses
- 3 Storage areas
- 4 Workshops
- 5 Basements

TWO PACK WATER BASED
COLOURED EPOXY COATING
Satin Finish

envirothane 2100



TWO PACK WATER BASED
COLOURED EPOXY COATING
Gloss Finish

envirothane 2200



“ The attractive satin finish, excellent durability and ease of application makes **Envirothane 2100** the most popular choice for workshops and storage areas. ”

ENVIROTHANE 2100

Coloured Satin Epoxy Coating

This pigmented epoxy is available in any colour and is the most popular choice for all medium wear areas. Good penetration into substrates also makes it a well used primer beneath heavy duty and coloured gloss topcoats such as E2200 and E4110. Envirothane 2100 is easy and safe to apply and can be used with anti-slip media to achieve various safety ratings. Low VOC certification is available for GreenStar projects. Envirothane 2100 is also the most economical base for flake floors and has been used with artistic pigment spreading techniques to produce attractive mottled effects. Extra wear for higher traffic areas can be achieved by applying further topcoats - e.g. car park turning areas.

Key Features

- 1 Suitable as primer and top coat
- 2 Safe and easy application
- 3 Available in any colour
- 4 Suitable for use with anti-slip media
- 5 Enviro-friendly
- 6 Satin finish
- 7 Easy to clean and maintain
- 8 Compatible with line marking
- 9 Chemical resistant

Typical Use Areas

- 1 Car parks
- 2 Schools
- 3 Food prep areas and canteens
- 4 Storage areas
- 5 Factories
- 6 Workshops and laboratories

“ The full gloss, smooth finish of Envirothane 2200 provides an excellent balance between cleanability and safety when used with anti-slip media. ”

ENVIROTHANE 2200

Coloured Gloss Epoxy Coating

This pigmented full gloss epoxy coating is available in any colour and is the most appropriate choice for medium to heavy duty coloured applications where cleanability is a prime requirement e.g. in factories for food preparation and laboratories. Envirothane 2200 has low odour, is safe and easy to apply and low VOC certification is available for GreenStar projects. While Envirothane 2200 provides an extremely durable surface, extra wear for higher traffic areas can be achieved by applying further topcoats - e.g. in doorways and in machine operating areas.

Key Features

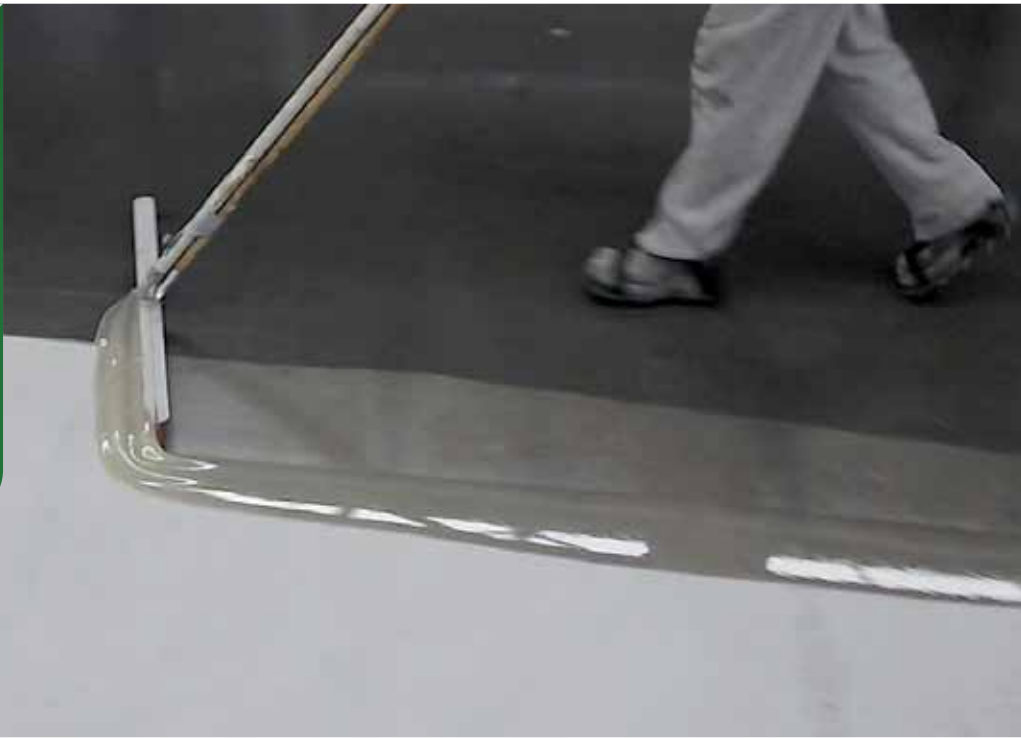
- 1 Suitable as primer and top coat
- 2 Safe and easy application
- 3 Available in any colour
- 4 Suitable for use with anti-slip media
- 5 Enviro-friendly
- 6 Gloss finish
- 7 Easy to clean and maintain
- 8 Compatible with line marking
- 9 Chemical resistant

Typical Use Areas

- 1 Car parks
- 2 Schools
- 3 Food prep areas and canteens
- 4 Storage areas
- 5 Factories
- 6 Workshops and laboratories

TWO PACK 100% SOLIDS
CLEAR EPOXY COATING
Gloss Finish

envirothane 4111



TWO PACK 100% SOLIDS
COLOURED EPOXY COATING
Gloss Finish

envirothane 4110



“ Envirothane 4111 can be substantially thickened by adding quantities of dry sand and makes an excellent coving and patching compound. ”

ENVIROTHANE 4111
100% Solids Clear Epoxy Coating

Envirothane 4111 provides extra heavy duty protection for high wear industrial floors and areas where chemical spillage is anticipated. This versatile coating can be thinned down to apply as a primer or thickened by adding dry sand for high build trowel-on applications and forming coves at wall-to-floor joints. Envirothane 4111 is used very effectively with anti-slip media and is low odour and safe to use. Low VOC certification is available for GreenStar projects.

Key Features
1 Suitable as primer and top coat
2 Can be used for high build applications, patching and coving
3 Extremely durable
4 Used very effectively with anti-slip media
5 Enviro-friendly
6 Very chemical resistant
7 Easy to clean and maintain
8 Compatible with line marking

Typical Use Areas
1 Heavy manufacturing plants
2 Water treatment plants
3 Butcheries and abattoirs
4 Chemical storage and battery charge areas
5 Workshops and laboratories
6 Public Amenities
7 Hangars
8 Jails
9 Truck loading areas
10 Wash bays

“ Envirothane 4110 provides ultimate floor protection for very heavy wear environments and presents an attractive glossy finish. ”

ENVIROTHANE 4110
100% Solids Coloured Epoxy Coating

Envirothane 4110 is a premium solvent free epoxy which provides extra heavy duty protection for high wear industrial floors and areas where chemical spillage is anticipated. Envirothane 4110 can be tinted to almost any colour and is usually used as a topcoat over concrete floors which have been primed with Envirothane 4111 or Envirothane 2100. Substantial film builds can be achieved with Envirothane 4110 and it is very effectively used with anti-slip media. It is low odour and safe to use, and low VOC certification is available for GreenStar projects.

Key Features
1 Available in almost any colour
2 Extremely durable
3 Very chemical resistant
4 Used very effectively with anti-slip media
5 Enviro-friendly
6 Easy to clean and maintain
7 Compatible with line marking
8 Can be used for high build applications

Typical Use Areas
1 Heavy manufacturing plants
2 Water treatment plants
3 Butcheries and abattoirs
4 Chemical storage and battery charge areas
5 Workshops and laboratories
6 Public Amenities
7 Hangars
8 Jails
9 Truck loading areas
10 Wash bays

TWO PACK WATER BASED
POLYURETHANE COATING
Satin Finish

envirothane 8470



TWO PACK WATER BASED
POLYURETHANE COATING
Matt, Satin or Gloss Finish

envirothane 8476



“ Envirothane 8470 is an economical, UV resistant coating for driveways, walkways and outdoor entertainment areas. ”

ENVIROTHANE 8470

Coloured/Clear Satin Polyurethane Coating

Envirothane 8470 is a high quality polyurethane coating with excellent UV stability and hardness which makes it an ideal topcoat for external walkways and other outdoor areas. Envirothane 8470 is usually used as a UV protective topcoat over epoxy systems to prevent yellowing and chalking in external conditions. Envirothane 8470 is commonly used in laboratories, trade training centres and schools because it is very chemical resistant and cleanable. Envirothane 8470 clear satin is a very popular finish for polished concrete and flake floors. The coloured bases can be tinted to almost any colour. Low VOC certification is available for GreenStar projects.

Key Features	↓
1 Available in clear and colours	
2 Extremely UV resistant	
3 Very hard wearing	
4 Attractive satin finish	
5 Enviro-friendly	
6 Easy to clean and maintain	
7 Chemical resistant	
8 Compatible with line marking	

Typical Use Areas	↓
1 Schools	
2 Food prep areas	
3 Lobbies and showrooms	
4 External walkways	
5 Workshops and laboratories	
6 Retail shops	
7 Arcades and concourses	
8 Drive-throughs	

“ Envirothane 8476 is a unique multi-featured UV stable coating which offers the full range of finishing options for all internal and external environments. ”

ENVIROTHANE 8476

Multi-Use Polyurethane Coating

Envirothane 8476 is a new generation polyurethane coating which can be applied generously to achieve high build-ups without aeration. This means that it can be used very effectively with anti-slip media and makes it an excellent all round choice for producing a wide range of beautiful floors with safety ratings in shopping centres, laboratories, industrial showrooms and all external applications subject to extreme conditions. Envirothane 8476 has outstanding UV stability and is therefore an excellent UV protective topcoat over epoxy systems on external walkways and other floor surfaces which are subject to unfiltered UV light. The attractive easy-to-clean finish of the Envirothane 8476 clear version is very popular for polished concrete floors and is available in various sheen levels. Low VOC certification is available for GreenStar projects.

Key Features	↓
1 Can be applied heavily without aeration	
2 Available in clear and colours	
3 Extremely UV resistant	
4 Very hard wearing	
5 Available in various sheen levels	
6 Enviro-friendly	
7 Easy to clean and maintain	
8 Can be used with anti-slip media	
9 Chemical resistant	
10 Compatible with line marking	

Typical Use Areas	↓
1 Schools	
2 Food prep areas	
3 Lobbies and showrooms	
4 External walkways	
5 Workshops and laboratories	
6 Retail shops	
7 Arcades and concourses	
8 Drive-throughs	

TWO PACK SOLVENT BASED
COLOURED EPOXY COATING
Satin or Gloss Finish

vitrethane 410



TWO PACK SOLVENT BASED
CLEAR POLYURETHANE COATING
Satin or Gloss Finish

vitrethane 638



“ Vitrethane 410 features easy-flow and self levelling properties and provides thick, heavy duty protection for high wear industrial floors and areas where chemical spillage is anticipated. ”

VITRETHANE 410

High Solids Coloured Epoxy Coating

Vitrethane is a premium high solids pigmented epoxy coating with enhanced flow and self-leveling properties which makes it an excellent choice for high build applications. V410 can be tinted to almost any colour and is usually used as an ultra durable, easy-to-clean topcoat for concrete floors which have been primed with Envirothane 4111 or Envirothane 2100. Vitrethane 410 is used very effectively with anti-slip media and can be used for external areas if over coated with UV resistant polyurethanes.

Key Features	↓
1	Easy high build application
2	Available in any colour
3	Available in satin or gloss
4	Extremely hard wearing
5	Easy to clean and maintain
6	Can be used with anti-slip media
7	Chemical resistant
8	Compatible with line marking

Typical Use Areas	↓
1	Factories
2	Car parks
3	Treatment plants
4	Battery charging areas
5	Workshops and laboratories
6	Public amenities
7	Hangars
8	Jails
9	Truck loading areas
10	Wash bays
11	Butcheries and abattoirs

“ Vitrethane 638 is the most hardwearing of the polyurethane floor coatings and excels as a protective topping in all outdoor situations. ”

VITRETHANE 638

Solvent Based Clear Polyurethane Coating

Vitrethane 638 is highly durable solvent based polyurethane which is ideal for application as an attractive hard wearing clear topcoat on large internal and external floors where uniformity is a prime requirement. It is especially useful as a topcoat for large sun-filled structures and external areas such as showrooms, open workshops and outdoor entertainment areas. Vitrethane 638 can be applied confidently over epoxies such as Envirothane 4110 or Envirothane 2100. Vitrethane 638 is used very effectively with anti-slip media to provide safety ratings for external walkways.

Key Features	↓
1	Easy to achieve an even finish
2	Extremely UV resistant
3	Clear finishing coat
4	Available in satin or gloss
5	Extremely hard wearing
6	Easy to clean and maintain
7	Can be used with anti-slip media
8	Chemical resistant
9	Compatible with line marking

Typical Use Areas	↓
1	Showrooms
2	Outdoor areas
3	Open workshops
4	Lobbies
5	Factories
6	Hangars
7	External washbays
8	External car parks
9	Drive-throughs

SINGLE PACK RUBBERISED
NON-SLIP COATING
Low Sheen, Stippled Finish

tredgrip



SINGLE PACK RIGID
NON-SLIP COATING
Low Sheen, Stippled Finish

tredrock



“ Tredgrip is a revolutionary rubberised non-slip floor coating which offers a quick and easy safety solution for pedestrian walkways in a range of bright inspirational colours. ”

TREDGRIP

Single Pack Rubberised Non-Slip Coating

Tredgrip is a single pack, water based, rubberised safety-floor coating which provides excellent foot grip for indoor and outdoor walking surfaces. Tredgrip is a first choice for covering older walkways because quite thick build-ups can be achieved, and the stippled finish provided by the incorporated rubber particles covers imperfections beautifully. Furthermore, Tredgrip's tough flexibility effortlessly covers hairline cracks which makes it a very effective waterproofer for leaking balconies and podiums. Tredgrip is available in a range of bright colours which are becoming increasingly popular for sports courts, swimming pool surrounds, child care centres and boat decks where safety and easy maintenance are prime requirements. Additional features can be gained by overcoating with Tredseal. Low VOC certification is available for GreenStar projects.

Key Features

- 1 Easy and safe application
- 2 UV resistant
- 3 Available in a range of colours
- 4 Low sheen finish
- 5 Can be overcoated
- 6 Extremely hard wearing
- 7 Easy to clean and maintain
- 8 Chemical resistant
- 9 Enviro-friendly
- 10 Excellent waterproofer
- 11 Compatible with line marking

Typical Use Areas

- 1 Pedestrian walkways
- 2 Sports courts
- 3 Outdoor learning areas
- 4 Access ramps and shop entrances
- 5 Boat decks
- 6 Podiums and balconies
- 7 Stairways and patios
- 8 Pool surrounds

“ Tredrock's precision blend of incorporated aggregates provides a rigid non-slip stipple which is an amazing achievement in a single pack water based product. Tredrock can be easily and safely applied by almost anybody. ”

TREDROCK

Single Pack Rigid Non-Slip Coating

Tredrock is a single pack, water based floor coating which incorporates a fine balance of hard aggregate and is designed to present a hard wearing non-slip stippled finish which can handle heavier traffic and wear. Tredrock applies easily by roller to concrete walkways, ramps, driveways and malls to provide excellent anti-slip properties for areas which can become slippery and hazardous from weather and chemical spillage. Tredrock is also excellent for rejuvenating old and hazardous surfaces because higher build-up can be achieved to cover imperfections. Tredrock's cleanability and visual appearance can be further enhanced by overcoating with Tredseal which makes it an excellent system for service stations where spillages occur. Tredrock also comes in a range of bright colours and low VOC certification is available for GreenStar projects.

Key Features

- 1 Easy and safe application
- 2 UV resistant
- 3 Available in a range of colours
- 4 Low sheen finish
- 5 Can be overcoated
- 6 Hard wearing
- 7 Easy to maintain
- 8 Chemical resistant
- 9 Enviro-friendly
- 10 Compatible with line marking

Typical Use Areas

- 1 External walkways
- 2 Sports courts
- 3 Outdoor learning areas
- 4 Access ramps and shop entrances
- 5 Podiums and malls
- 6 Stairways and patios
- 7 Driveways
- 8 Service stations

SINGLE PACK CLEAR
PROTECTIVE COATING
*Matt, Satin and
Gloss Finish*

tredseal



SINGLE PACK PENETRATING
SURFACE PRIMER

tredprime



“Tredseal is a clear UV resistant topcoat which compliments Tredgrip, Tredrock and other products by enhancing appearance and providing additional protective features to cope with spill prone areas such as fuel refilling stations and other demanding environments.”

TREDSEAL

Single Pack Clear Protective Coating

Tredseal is a single pack, UV resistant, protective clear topseal which can be applied to Tredgrip, Tredrock and many other coatings to provide additional features such as cleanability, enhanced visual appearance and chemical tolerance. Tredseal is available in low sheen to reduce visual impact, satin for subtle sheen enhancement and gloss for wet appearance. The water based Tredseal is very easy and safe to apply and low VOC certification is available for GreenStar projects.

Key Features

- 1 Easy and safe application
- 2 UV resistant
- 3 Matt, satin or gloss finish
- 4 Can be overcoated
- 5 Extremely hard wearing
- 6 Easy to maintain
- 7 Chemical resistant
- 8 Enviro-friendly
- 9 Compatible with line marking

Typical Use Areas

- 1 External walkways
- 2 Sports courts
- 3 Outdoor learning areas
- 4 Balconies and patios
- 5 Access ramps and shop entrances
- 6 Podiums and malls
- 7 Car parks
- 8 Service stations

“Tredprime ensures successful application of single pack waterborne floor products and is particularly essential for providing good adhesion properties on older concrete surfaces.”

TREDPRIME

Single Pack Penetrating Surface Primer

Tredprime is a clear single pack primer which is designed to deeply penetrate concrete and other surfaces to bind chalkiness and provide a suitable substrate for the successful application of waterborne floor coatings such as Tredgrip, Tredrock and Tredseal. The water based Tredprime is very easy and safe to apply.

Key Features

- 1 Easy and safe application
- 2 Binds chalkiness
- 3 Overcoatable with most waterborne products

Typical Use Areas

- 1 Concrete walkways
- 2 Warehouse floors
- 3 Sports courts
- 4 Outdoor learning areas
- 5 Balconies and patios
- 6 Access ramps and shop entrances
- 7 Podiums and malls
- 8 Car parks
- 9 Service stations



ENVIROFLAKE SEAMLESS FLOORING SYSTEM

The attractive multi-coloured Enviroflake Flooring System is a very popular decorative floor finish for amenities, kitchens, retail shops and showrooms. Flake colours can be mixed and matched to blend in with surrounding surfaces, brighten up sparsely furnished areas and enhance corporate imagery by using company colours.

The dappled eye-catching appeal of Enviroflake Seamless Floors is accompanied by excellent hygiene due to the absence of grout and joint lines. Cleanability of Enviroflake Seamless Floors in kitchens and amenities is often further enhanced by installing corner coving which is explained separately. A step-by-step Enviroflake Seamless Flooring method is included here.

System Breakdown Table

STEP 1 - PREPARATION	Provide profile key by grinding or acid etching, mask the edges and clean the area.
STEP 2 - PRIMING	Prime the surface – usually with E2100 to colour @ 6 - 8m²/L.
STEP 3 – BASECOAT & BROADCAST	Apply basecoat – E2100 or E4110 to colour, usually light gray or white @ 5 - 6m²/L and broadcast Enviroflake into the basecoat while still wet @ approx. 2 - 3m² per kg.
STEP 4 - SHAVING	Flatten the surface by lightly scraping or sanding to remove protruding flake. Change the perimeter tape and remove all loose flake by sweeping or vacuuming.
STEP 5 - ENCAPSULATING	Apply the clear encapsulating coat – usually E2000 or E8476 @ approx. 5m²/L.
STEP 6 - TOPCOATING	Apply the topcoat – usually E2000 for interior floors or E8476 for areas subject to UV light.

ENVIROFLAKE SEAMLESS FLOORING SYSTEM



Step 1: Preparation

Concrete substrates are usually prepared by diamond grinding or acid etching to provide a clean, sound, absorbent, profiled surface for optimum adhesion of the primer coat. Previous coatings or adhesives should be removed by grinding and any rising damp problems should be treated before proceeding further. Carefully attach a good quality broad masking tape at the wall-to-floor joint or along a pre-marked skirting height. This is important to prevent any mixed wet

product from damaging adjacent areas and also to form a neat edge line. Be aware that epoxy overlapping onto the tape has the ability to stick the tape fast to the wall when properly cured so try to cleanly remove the tape as soon as practicable after the flake has been broadcasted into the base coat. Lastly, ensure that the floor surface is clear, dust-free, clean and dry before mixing product for priming.



Step 2: Priming

Priming is usually done with E2100 tinted to the selected base colour. Power-mix Part A and Part B of E2100 on your drop sheet in a clean bucket according to the instructions on the technical data sheet. Once parts A & B have been thoroughly mixed, the product may be thinned to aid application by adding 10-25% water. As a guide, you could mix 5 litres of E2100 in a 9 litre bucket, thin with 1 litre of water and then apply this quantity to about 40m² within an hour.

Apply the primer coat around the taped perimeter by brush and then roll the centre with a short nap roller using some right angled cross strokes to maximise penetration and uniformity. Usage rate should be approx. 6 - 8m² per litre. Allow a drying time of at least 4 hours before applying basecoat. If you intend to install epoxy corner coving, this should be done before commencing the next step.



Step 3: Basecoat & Broadcast

The base coat is usually E2100 or E4110 tinted to selected colour. Power-mix Part A and Part B of the basecoat in a clean bucket on your drop sheet according to the instructions on the technical data sheet. It is customary not to thin the basecoat because it is important to achieve a good film thickness to grip the flake. A 5 litre mix should do about 25 - 30m² within an hour.

Starting at the far corner, apply the basecoat by brush (for the edges) and short nap roller in sections of approx 6 - 8m² and evenly broadcast the Enviroflake into the wet product until all the basecoat is covered, except at the leading edge. Usage rates should be approx. 5 - 6m² per litre for the basecoat and approx. 2-3m² per kg for the Enviroflake.



Step 4: Shaving

After allowing a curing period of at least 16 hours, remove the edge tape, sweep all the loose flakes from the surface using a semi stiff broom and apply more perimeter tape around the edge a couple of millimetres

above the previous line. Flatten the surface by gently scraping or sanding the surface in all directions to shave off the protruding flakes and then carefully vacuum the floor.



Step 5: Encapsulating

Power-mix Part A and Part B of the selected epoxy or polyurethane clear gloss encapsulating coat (usually E2000 or E8476) in a clean bucket on your drop sheet according to the instructions on the technical data sheet. Remember that E2000 clear epoxy is milky white when 1st mixed and E8476, as with all polyurethanes,

needs to be thoroughly mixed until completely smooth. Apply the encapsulating coat gently, evenly and generously by brush and short nap synthetic roller at a rate of about 5m² per litre and allow another 16 hour curing period.



Step 6: Topcoating

It is important to select a suitable topcoat which will meet all the visual and wearing requirements. So consider whether you want a gloss or satin finish and if you need special properties such as UV resistance and chemical tolerance. If you wish to incorporate anti-slip media, this should be considered now too.

Mix the topcoat (usually E2000 or E8476) as per the instruction in Step 5 above and apply at a rate of 6 - 8m² per litre. In many cases a 2nd topcoat is desirable. Remove the perimeter tape and protect the floor from full traffic for 7 days.



epoxy
corner coving

EPOXY CORNER COVING

For sanitary areas such as kitchens, amenities and food storage rooms, it is important to eliminate all crevasses and tight corners which could potentially harbour mould or bacteria. Epoxy corner coving not only eliminates the tight corners but also optimises hygiene by aiding cleaning and drying.

Epoxy corner coving involves priming the surface, then troweling a stiffened version of E4111 into the corner joints and forming it into a neat concave radius by means of a round nosed coving trowel or suitable cylindrical object such as a piece of metal pipe.

This may sound simple but be aware that coving often requires some skill and practise. Of course, a lot of the secret to successful coving lies in getting the stiffened E4111 mix just right. The E4111 is stiffened by adding selected dry sand at an approximate ratio of 7kg of sand to 1kg of E4111. This 7:1 ratio should be taken as a rough guide because temperature and other factors can significantly affect the rigidity of the mix. The mixture therefore needs to be fine-adjusted to achieve a good balance between rigidity and formability.

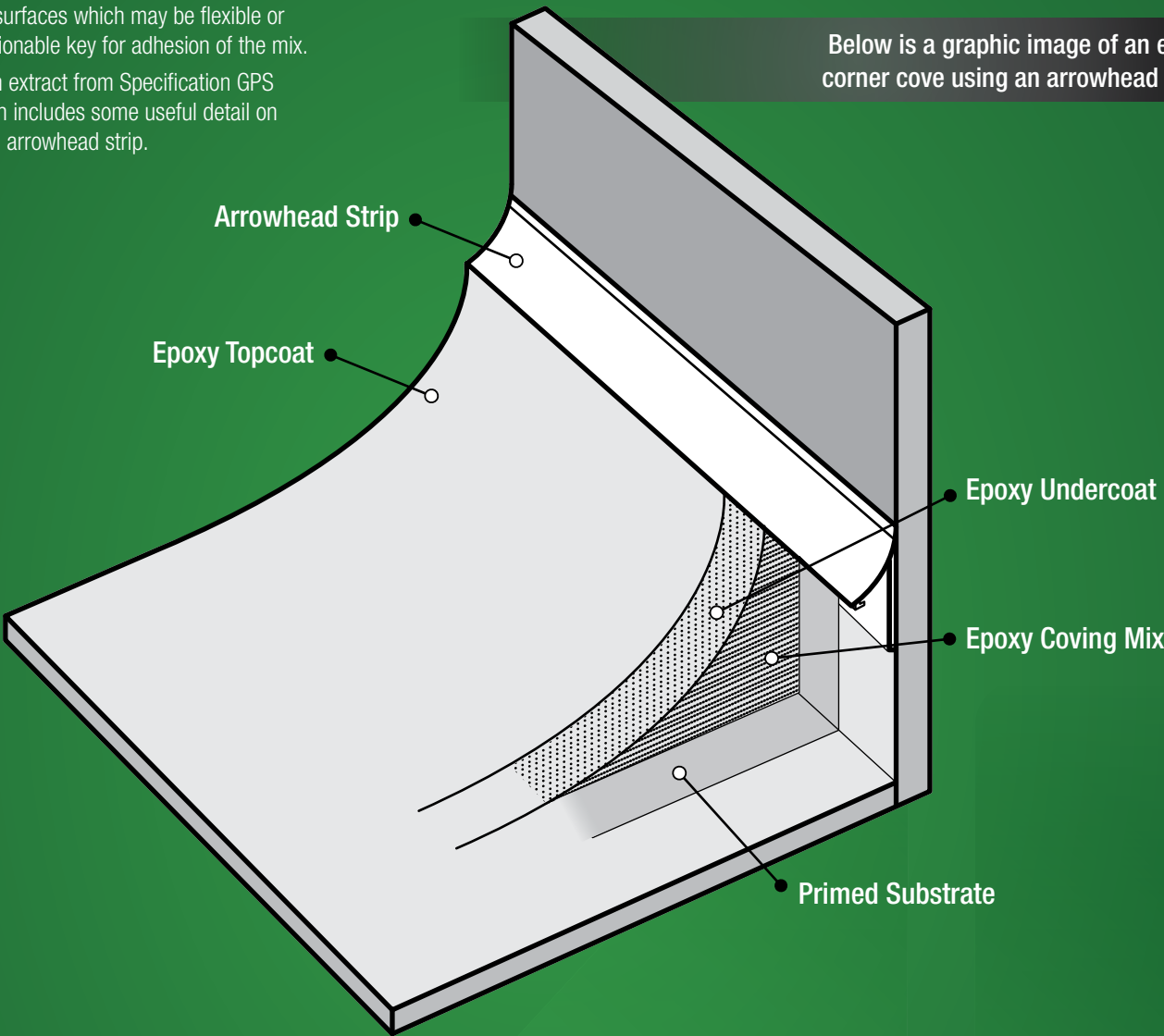


Even a small corner cove will facilitate hygiene control.

To facilitate the formation of a neat wall-to-floor cove, many applicators opt to attach aluminium 'arrowhead' extrusion strips to the wall at a prescribed height off the floor. This arrowhead strip forms the top extremity of the cove and presents a neat profiled top edge. Arrowhead coving strips are especially useful for coving along metal walls in coolrooms and against other wall surfaces which may be flexible or have questionable key for adhesion of the mix.

Below is an extract from Specification GPS 1999 which includes some useful detail on coving with arrowhead strip.

Below is a graphic image of an epoxy corner cove using an arrowhead strip.



Details

- 1 Attach aluminium arrowhead to wall at designated top line of cove.
- 2 Prime area to be coved using E4111 Two Pack Solvent Free Epoxy. Allow to cure for 1 hour.
- 3 Make up coving mix as follows:
 - a. 1 mixed litre of E4111 Two Pack Solvent Free Epoxy.
 - b. 2.3 kg of each of the 3 EST Sands – Fine, Medium and Coarse.
 - c. Final mix is 6.9kg EST Sand and 1kg E4111 (NB: – 1 litre E4111 = 1 kg)
 Mix the E4111 first, and then add the EST Sands, all with a power stirrer.
- 4 Place an excess of coving mixture in the wall/floor corner. Using strong pressure, push out the coving mix with the coving trowel along the cove, shaping it as you go. To reduce friction between the coving tool and the coving mixture, have a bucket of slow solvent close by to continually dip the coving tool into.



slip resistance

SLIP RESISTANCE

Due to the law of gravity, slip resistance is essential for many floor surfaces. Specific anti-slip ratings are often required for floors in workplaces and public areas. In Australia, the standard reference point in this regard is the *Australian Standard Hand Book 197 – An Introductory Guide to the Slip Resistance of Pedestrian Surface Materials*.

Slip resistance is influenced by the following factors

- 1 The inherent abrasion or 'slipperiness' of the floor surfaces,
- 2 The nature of the likely pedestrian and vehicular activity,
- 3 The type of footwear and wheel treads,
- 4 The angle or slope of the floors, and
- 5 The likelihood and nature of contamination.

All possibilities and activities have to be considered and allowed for when determining anti-slip ratings for specific areas. For instance, a floor which might be safe under dry conditions could be hazardous if wet or oily. The gait of pedestrian traffic could also increase risk of slippage such as commuters hurrying to catch a train. Stick-on tactiles with maximum grip profiles are therefore frequently installed on railway station platforms. Sports courts and children's play areas often require optimum

non-slip properties on softer rubberized surfaces to minimise injuries from falls during fast moving activities.

It should be kept in mind however, that higher anti-slip ratings tend to decrease cleanability and careful consideration should therefore also be taken with respect to the purpose of the floor and its ongoing maintenance.

Test methods

Of the various test methods described in the handbook for evaluating slip resistance of flooring systems, the laboratory based Ramp Test is often considered to be the most realistic method because a person supported with an appropriate harness physically walks down a ramp coated with the test finish. The angle of the ramp is increased until the threshold of safe walking is reached. The Australian Standard classifies a set of Slip Hazard Classification Groups (R9 - R13) which reflects the typical acceptance thresholds determined by the Ramp Test. A higher R number indicates that a person could walk safely on the surface at a higher ramp angle.

The Pendulum Test is mostly used for onsite assessments because the testing device can be easily carried to the site. The pendulum is a swinging arm with a small rubber boot on the end which indicates the amount of resistance encountered as it lightly sweeps the surface.

Anti-slip media

While various types of anti-slip media are used with two pack epoxy and polyurethane flooring products to achieve slip resistance ratings, we recommend using aluminium oxide granules which is available in various sizes or grades. Aluminium Oxide non-slip media is a naturally occurring mineral with a Mohs hardness of approximately 9.5 – this is very close to diamond hardness! AO is also multi-faceted, embeds easily and is well supported within epoxy films.

The following table presents three grades of AO non-slip media with indications of expected Pendulum and Ramp Test Ratings

NON-SLIP MEDIA GRADE	PENDULUM RATINGS	RAMP TEST RATINGS
1. EA046	V to W	R11 to R12
2. EA060	W to X	R10 to R11
3. EA090	X to Z	R9 to R10

Obviously, film thicknesses of the coatings used with the AO non-slip media greatly affect the ratings achieved, so the above should be taken as a rough guide.

The General Purpose Specifications on our website at www.aicoatings.com require

amendments to provide anti-slip ratings - so, if you have a floor area which requires a specific anti-slip rating, please contact one of our team members and ask for an Area Specific Instruction (ASI) to suit your application.



Ramp test in progress

(Photo: Courtesy of CSIRO)



Pendulum test in progress

Envirothane
Usage Guide



HANDY HINTS FOR TWO PACK PRODUCTS

- 1

Carefully prepare a product mixing bay by cordoning off a windless area and laying a good drop sheet.
- 2

Always use a variable speed power stirrer to mix two pack products.
- 3

Keep a good supply of clean buckets and application equipment on site.
- 4

Defluff rollers with masking tape or insulation tape before using them.
- 5

Take care not to let contamination drop into buckets. It helps to clean the container lids before opening them and replace them immediately after pouring!
- 6

It's a good idea to have a sieve on site because product in previously opened containers may need straining. An old stocking works well.
- 7

Apply product liberally and evenly. Many applicators pour & spread where higher film thicknesses are required but dip & spread is better when applying thinner filming topcoats.
- 8

Apply product in sections. It is good practice to apply a quantity of product to a section in one direction and then finish off the section by rolling lightly and slowly in the opposite direction.
- 9

Try to maintain a 'wet edge' to avoid picking up 'skinned' product. If you do have to roll onto a skinned edge, ensure you approach it with a well loaded roller.
- 10

Do not work the product too vigorously. Push and pull the roller slowly backward and forward across the wet coating only enough times to spread it out, even it up and overlap into the previously applied adjacent sections.
- 11

Remember that achieving attractive uniform finishes with topcoats takes a lot more care and skill than applying priming and intermediate coats.
- 12

Thin products only when necessary to aid spreading and only thin down according to instruction sheets. Thinning of two pack products can only be done after the two parts have been thoroughly mixed according to instructions on technical data sheets.
- 13

Polyurethanes go lumpy or 'gluggy' during the 1st stages of mixing and should be thoroughly and carefully stirred until completely smooth.
- 14

Be aware of film thicknesses which need to be achieved for each product. Carrying out a trial by mixing a litre and then applying it to a marked out area is a good method of gauging the correct 'spreading feel' and the result which needs to be achieved. Ending up with more excess product than intended is a big warning sign that another coat is needed.
- 15

It is a good idea to allow an extra topcoat for heavy wear areas and floors which require optimum uniformity for best visual results - e.g. showrooms with large windows.
- 16

Be careful not to mark the floor before or during the application of clear topcoats because any blemishes will be permanently sealed in.
- 17

Shorter nap synthetic rollers are usually most suitable for two pack products – 8-10mm nap works well.
- 18

If a low sheen or satin finish is required in clear, apply gloss as the primer to avoid a build-up of matting agent which can cause a whitening effect.
- 19

Observe drying/recoat times between coats and protect the areas from heavy traffic until fully cured.
- 20

Wear sole spikes when applying high build systems and installing Enviroflake Seamless Floors.
- 21

Water based two pack coatings reach their pot life limit without going hard, so don't be tempted to carry on applying beyond the pot life limit specified on the technical sheet.
- 22

Polyurethanes traditionally have poor adhesion to concrete, so always prime exposed concrete with epoxy first.
- 23

If anything is questionable – phone one of the A&I Coatings offices for advice immediately.

Quick contact information:
Telephone 1800 819 585
Email helpdesk@aicoatings.com
Web www.aicoatings.com

TYPICAL USAGE OF ENVIROTHANE
TWO PACK WATER BASED COATINGS



Internal Application

Coating Systems for Internal Applications

- Garage and Workshop Floors

• Wash Rooms
- Factory/Warehouse Floors and Walls

• Internal carparks
- Shopping Centres

• Plant rooms

COLOUR/ GLOSS LEVEL	BASE COAT	REC. SPREAD RATE M²/L	TOP COAT	REC. SPREAD RATE M²/L
Colour Satin	E2100	8m²/L	E2100	8m²/L
Colour Gloss	E2100	8m²/L	E2200	6m²/L
Clear Satin	E2000 Gloss	8m²/L	E2000 Satin	8m²/L
Clear Gloss	E2000 Gloss	8m²/L	E2000 Gloss	8m²/L



External Application

Coating Systems for External Applications

- Driveways

• Foot Paths
- External Car Parks

• Showroom Floors
- Arcades and Podiums

• Shop Entrances

COLOUR/ GLOSS LEVEL	BASE COAT	REC. SPREAD RATE M²/L	TOP COAT	REC. SPREAD RATE M²/L
Colour Satin	E2100	8m²/L	E8470	8m²/L
Colour Gloss	E2100	8m²/L	E8476	8m²/L
Clear Satin	E2000 Gloss	8m²/L	E8470	8m²/L
Clear Gloss	E2000 Gloss	8m²/L	E8476	8m²/L

Notes:
These specifications are offered as a guide only and should be read in conjunction with the technical information in the Product Data Sheets. While detailed specifications for some of these systems are available on the A&I Coatings website, an Area Specific Instruction (ASI) should be requested for any special effects or requirements, such as anti-slip ratings.
The coverage rates in the tables are indicative only as coverage varies according to the porosity and profile of the substrate it is applied to. The intended use of every floor area should be carefully considered to determine the most suitable products and whether additional or heavier coats should be applied for increased durability.
It is advisable to protect dark and strong coloured coatings with a topcoat of clear to offset scratch and wear apparancy which is commonly caused by high concentration of pigments.

our floor coatings & systems

ENVIROTHANE 2000 Super Clear Epoxy Coating

ENVIROTHANE 2050 Clear Epoxy Slab Sealer

ENVIROTHANE 2100 Coloured Satin Epoxy Coating

ENVIROTHANE 2200 Coloured Gloss Epoxy Coating

ENVIROTHANE 4111 100% Solids Clear Epoxy Coating

ENVIROTHANE 4110 100% Solids Coloured Epoxy Coating

ENVIROTHANE 8470 Coloured/Clear Satin Polyurethane Coating

ENVIROTHANE 8476 Multi-use Polyurethane Coating

VITRETHANE 410 High Solids Coloured Epoxy Coating

VITRETHANE 638 Solvent Based Clear Polyurethane Coating

TREDGRIP Rubberised Non-Slip Coating

TREDROCK Rigid Non-Slip Coating

TREDSEAL Clear Protective Coating

TREDPRIME Penetrating Surface Primer

Enviroflake Seamless Flooring

Epoxy Corner Coving

Slip Resistance

Handy Hints for Two Pack Products

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