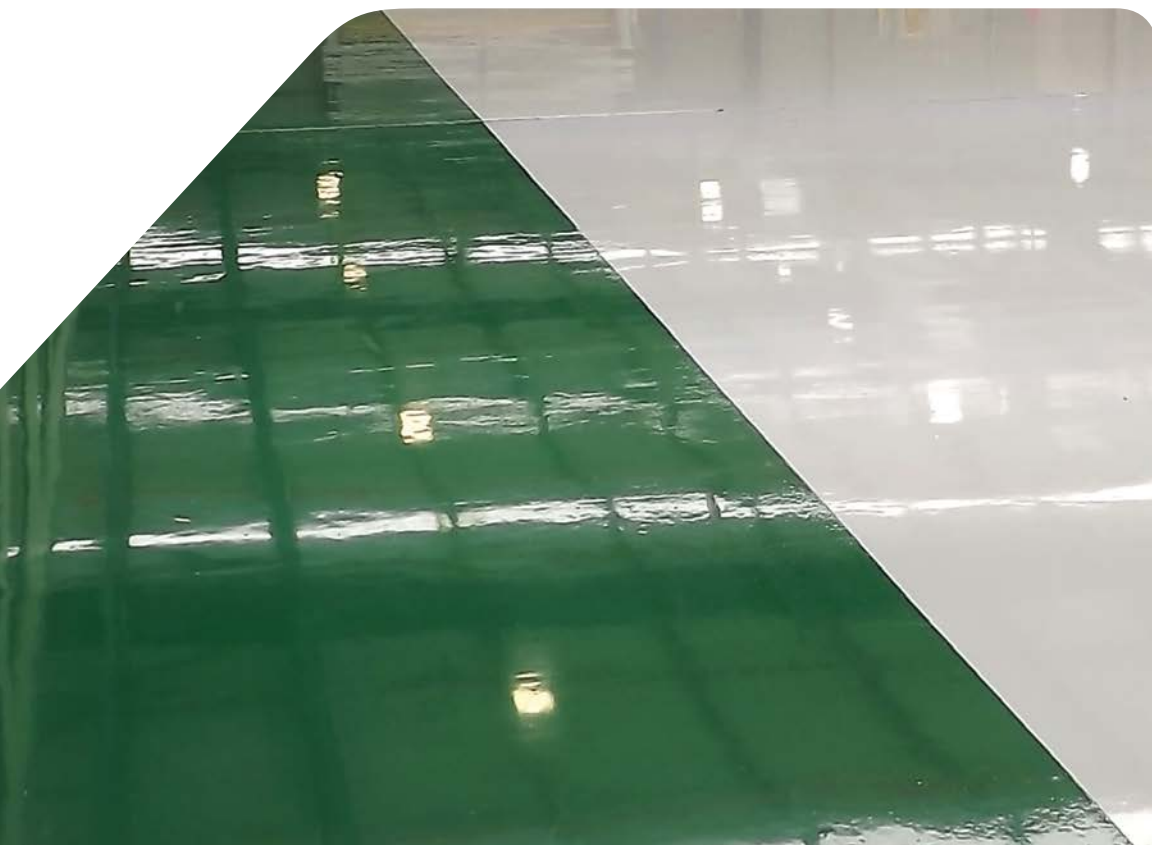


# FLOOR COATINGS GUIDE

Engineered Protective  
Coating Systems for  
Commercial and  
Industrial Floors



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## ACKNOWLEDGEMENTS

We acknowledge all images in this publication taken from non A&I Coatings resources

## DISCLAIMER

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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.

”

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.

### **Our Commitment to Quality and the Environment**

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.

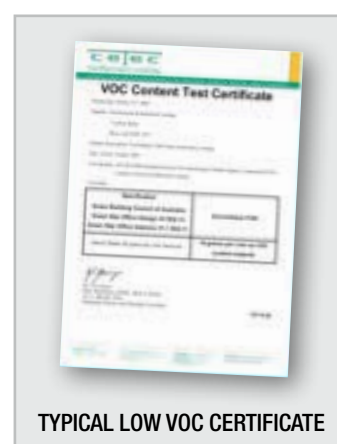
Research and development at A&I involves extensive practical testing in a multitude of applications to validate products according to the most stringent standards.

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**

## product matrix

ATTRIBUTES	CLEAR	COLOUR	SATIN	GLOSS	ROLLER	SPRAY	TROWEL
Enviroset 2000	✓		✓	✓	✓	✓	
Enviroset 2100		✓	✓		✓	✓	
Enviroset 2200		✓		✓	✓	✓	
Enviroset 4001	✓			✓	✓	✓	✓
Enviroset 4111	✓			✓	✓	✓	✓
Enviroset 4110		✓		✓	✓	✓	✓
Envirothane 8470	✓	✓	✓		✓	✓	
Envirothane 8476	✓	✓	✓	✓	✓	✓	
Vitreset 410		✓		✓	✓	✓	✓
Vitrethane 633	✓		✓	✓	✓	✓	
Vitrethane 638	✓			✓	✓	✓	
Tredgrip		✓	✓		✓		
Tredprime	✓		✓		✓	✓	

# OUR FLOORING PRODUCTS AT A GLANCE

FOOD GRADE	INT/EXT	WEAR SUITABILITY	CHEMICAL RESISTANCE	REC. SPREAD RATE M2/L	µm DFT PER COAT	RECOAT TIME	SOLIDS CONTENT %
✓	Int	Medium-heavy	Very Good	8	55	4 - 6 hrs	46
✓	Int	Medium-heavy	Good	6 - 10	40 - 60	4 - 6 hrs	37
✓	Int	Medium-heavy	Good	4.5 - 6	75 - 100	4 - 6 hrs	47
✓	Int	Very Heavy	Excellent	1 - 6	150 +	16 hrs +	100
✓	Int	Very heavy	Excellent	10	100	16 hrs +	100
✓	Int	Very heavy	Excellent	3 - 6	150 +	16 hrs +	100
✓	Both	Medium-heavy	Very Good	6 - 9	50 - 75	4 hrs	45
✓	Both	Medium-heavy	Very Good	5 - 10	40 - 100	2 - 8 hrs	42 - 50
	Int	Very heavy	Excellent	4 - 6	150 - 200	16 hrs	85
	Both	Medium-heavy	Very Good	8	50	4 hrs	42
	Both	Heavy	Excellent	5 - 8	60 - 110	16 hrs	57
	Both	Light-medium	Good	6	100	2 - 4 hrs	65
✓	Both	N/A	N/A	5	15 - 20	1 hr	10



TWO PACK WATER BASED  
SUPER CLEAR EPOXY COATING

*Gloss or Satin Finish*

enviroset 2000

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

## ENVIROSET 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. Enviroset 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 Enviroset 2000 to achieve various safety ratings and low VOC certification is available for GreenStar projects. Enviroset 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

TWO PACK WATER BASED  
COLOURED EPOXY COATING

*Satin Finish*

enviroset 2100

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

## ENVIROSET 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. Enviroset 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. Enviroset 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

TWO PACK WATER BASED  
COLOURED EPOXY COATING

*Gloss Finish*

enviroset 2200



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

## ENVIROSET 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. Enviroset 2200 has low odour, is safe and easy to apply and low VOC certification is available for GreenStar projects. While Enviroset 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 PENETRATING PRIMER

enviroset 4001

“ Enviroset 4001 exhibits a tolerance to concrete slabs which are damp or slightly contaminated with oils, chemicals and other contaminants. ”

## ENVIROSET 4001

### Clear Epoxy Penetrating Primer

A & I Coatings Enviroset 4001 is a clear two pack, solvent free, 100% solids epoxy with excellent penetration, surface hardness and adhesion to concrete substrates. Enviroset 4001 exhibits a tolerance to concrete slabs which are damp or slightly contaminated with oils, chemicals and other contaminants. This innovative product is low odour and low VOC, is user friendly and can be over coated with a wide variety of topcoats.

#### 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

#### 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 100% SOLIDS  
CLEAR EPOXY COATING

*Gloss Finish*

enviroset 4111

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

## ENVIROSET 4111

### 100% Solids Clear Epoxy Coating

Enviroset 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. Enviroset 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 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 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 100% SOLIDS  
COLOURED EPOXY COATING  
*Gloss Finish*

enviroset 4110

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

## ENVIROSET 4110

### 100% Solids Coloured Epoxy Coating

Enviroset 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. Enviroset 4110 can be tinted to almost any colour and is usually used as a topcoat over concrete floors which have been primed with Enviroset 4111 or Enviroset 2100. Substantial film builds can be achieved with Enviroset 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

“ 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



TWO PACK WATER BASED  
POLYURETHANE COATING  
*Satin or Gloss Finish*

envirothane 8476

“ 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



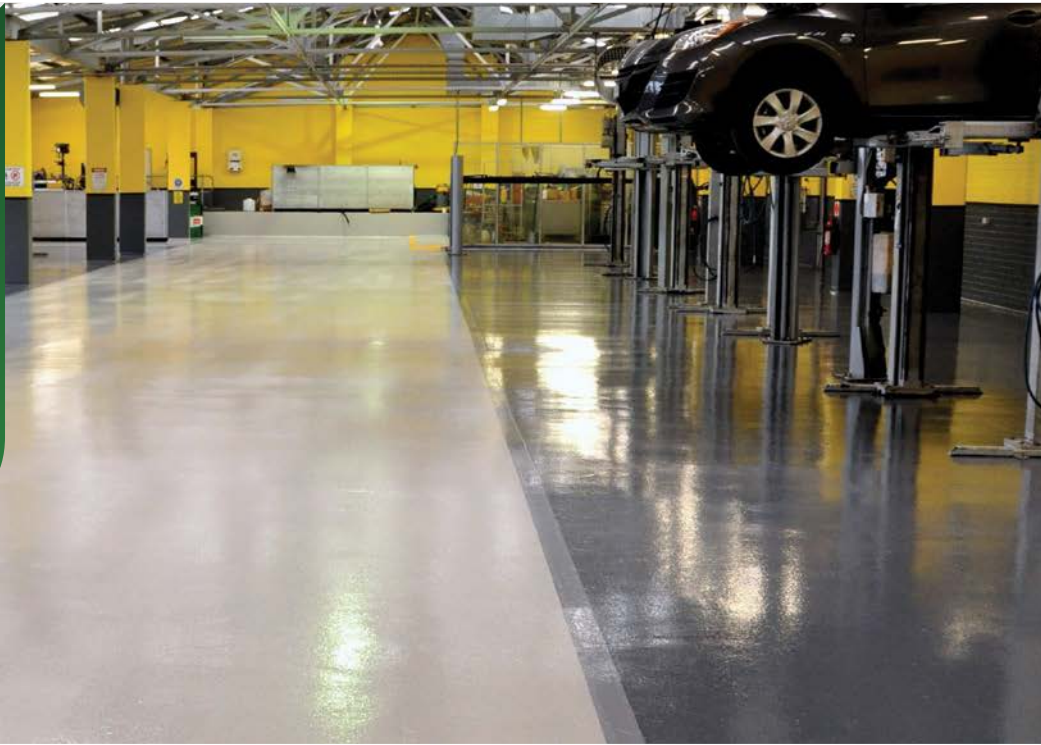
- 1 Schools
- 2 Food prep areas
- 3 Lobbies and showrooms
- 4 External walkways
- 5 Workshops and laboratories
- 6 Retail shops
- 7 Arcades and concourses
- 8 Drive-throughs



TWO PACK SOLVENT BASED  
COLOURED EPOXY COATING

*Gloss Finish*

vitreset 410



“ Vitreset 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. ”

## VITRESET 410

### High Solids Coloured Epoxy Coating

Vitreset is a premium high solids pigmented epoxy coating with enhanced flow and selflevelling 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 Enviroset 4111 or Enviroset 2100. Vitreset 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

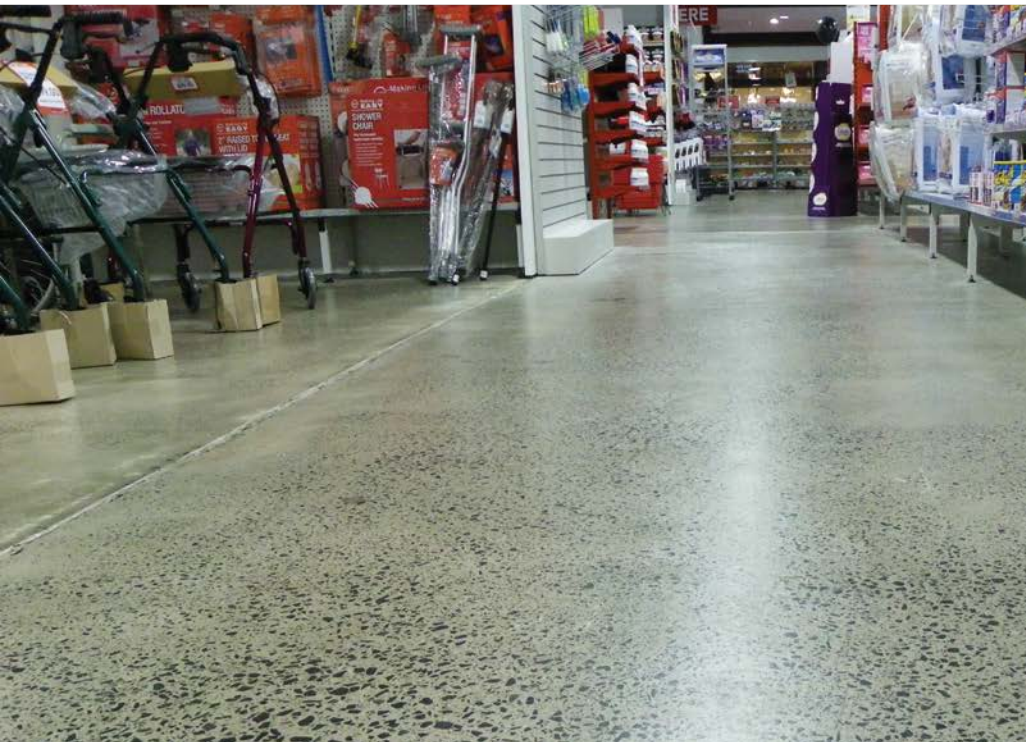


- 1 Easy high build application
- 2 Available in any colour
- 3 Available in satin or gloss
- 4 Extremely hard wearing
- 5 Easy to clean and maintain
- 6 Can be used with anti-slip media
- 7 Chemical resistant
- 8 Compatible with line marking

#### 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



TWO PACK SOLVENT BASED  
POLYURETHANE COATING

*Satin or Gloss Finish*

vitrethane 633

“ Vitrethane 633 is a versatile product suitable for application directly to concrete in internal and external applications and is well suited as a topcoat for epoxy coatings in external applications. ”

## VITRETHANE 633

### Solvent Based Polyurethane Coating

A&I Coatings Vitrethane 633 is a UV stable two pack solvent based polyurethane coating designed for a range of applications. Vitrethane 633 is a versatile product suitable for application directly to concrete in internal and external applications and is well suited as a topcoat for epoxy coatings in external applications. Vitrethane 633 displays excellent chemical resistance, is easy to apply and will provides a long lasting, and great looking floor.

#### Key Features



- 1 Suitable as primer and top coat
- 2 Extremely durable
- 3 Used very effectively with anti-slip media
- 4 Very chemical resistant
- 5 Easy to clean and maintain
- 6 UV Stable
- 7 Can be applied directly to concrete

#### 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 SOLVENT BASED  
CLEAR POLYURETHANE COATING

*Gloss Finish*

vitrethane 638



“ 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

“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

tredprime



“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





preparing a  
concrete floor



## PREPARING A CONCRETE FLOOR

The most important aspect of preparing a concrete floor is that the concrete surface is clean and free of all contaminants, dry, and etched. Diamond grinding is the ideal way to prepare most concrete floors, because the results are consistent as opposed to acid etching which can be influenced by the presence of curing agents and/or existing coatings.

Grinders use horizontally rotating discs to perform a multitude of tasks, from light texturing to open the pores of the surface to removal of paints and thin coatings. The key to their versatility are the grinding attachments, which are available in a variety of types and grits to suit different

applications. Because grinders use rotary action rather than impact to remove material, the depth of material removal is limited to about 1/8 inch, depending on the type of attachment used.

When using diamond tooling, it's important to choose the right bond hardness of the matrix (the material that holds the diamond segments) to achieve greater efficiency and to maximize tool life. In general, use a hard bond when grinding soft materials and a soft bond for hard materials. Softer materials wear away the diamonds more quickly.





enviroflake  
seamless flooring

## 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 - 8m <sup>2</sup> /L.
STEP 3 – BASECOAT & BROADCAST	Apply basecoat – E2100 or E4110 to colour, usually light gray or white @ 5 - 6m <sup>2</sup> /L and broadcast Enviroflake into the basecoat while still wet @ approx. 2 - 3m <sup>2</sup> 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. 5m <sup>2</sup> /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 40m<sup>2</sup> 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 - 8m<sup>2</sup> 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 - 30m<sup>2</sup> 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 - 8m<sup>2</sup> 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 - 6m<sup>2</sup> per litre for the basecoat approx. 2-3m<sup>2</sup> 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 5m<sup>2</sup> 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 - 8m<sup>2</sup> per litre. In many cases a 2nd topcoat is desirable.

Remove the perimeter tape and protect the floor from full traffic for 7 days.



enviroflake  
seamless flooring

## 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 fineadjusted to achieve a good balance between rigidity and formability.

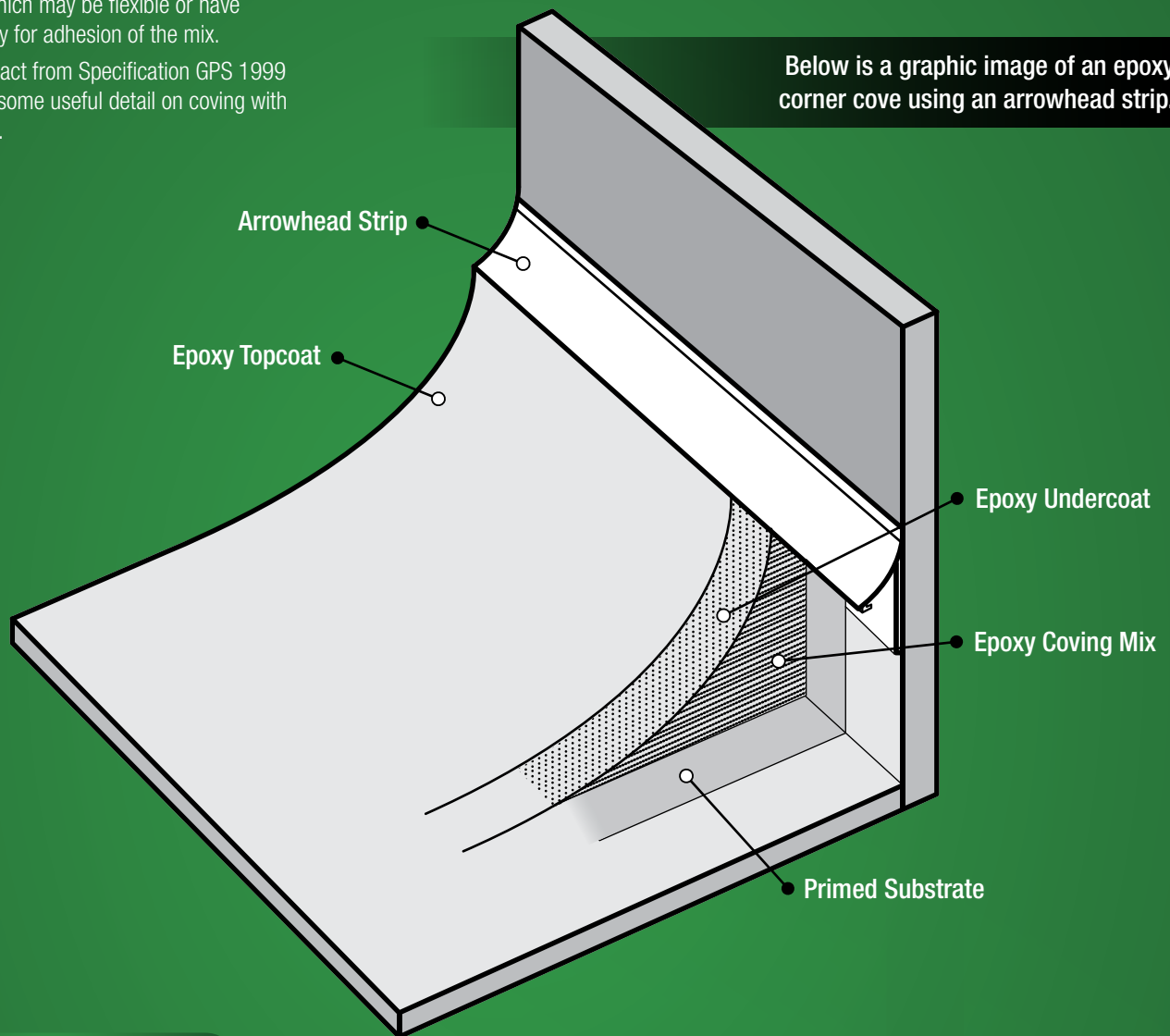




To facilitate the formation of a neat wall-to-floor cove, many applicators opt to attach aluminium 'arrowhead' extrusion strips to the wall at a prescribed height off the floor. This arrowhead strip forms the top extremity of the cove and presents a neat profiled top edge. Arrowhead coving strips are 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 198 – 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.

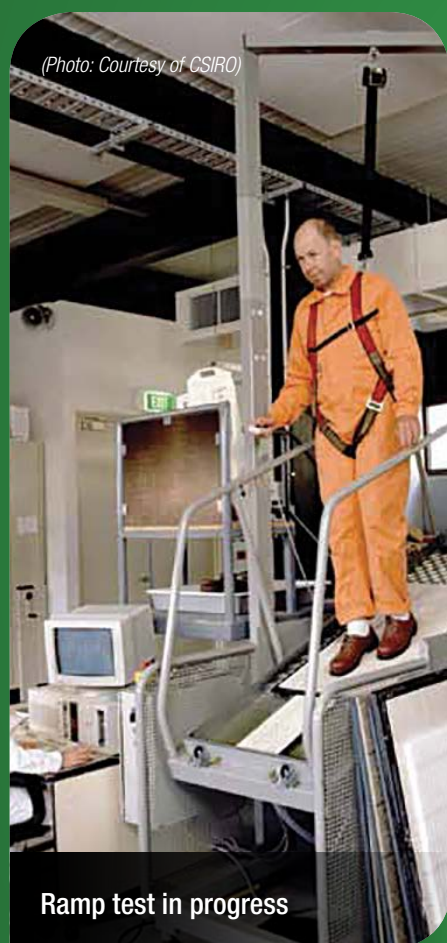
The following table presents three grades of AO non-slip media with indications of expected Pendulum and Ramp Test Ratings

Non-slip media grade	Pendulum ratings	Ramp Test ratings
1. EA046	P4 to P5	R11 to R12
2. EA060	P3 to P4	R10 to R11
3. EA090	P2 to P3	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](http://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.



(Photo: Courtesy of CSIRO)

Ramp test in progress



Pendulum test in progress

## NOTES





## 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 fee' 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 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**

## our floor coatings & systems

**ENVIROTHANE 2000** Super Clear Epoxy Coating

**ENVIROTHANE 2100** Coloured Satin Epoxy Coating

**ENVIROTHANE 2200** Coloured Gloss Epoxy Coating

**ENVIROSET 4001** 100% Solids Clear 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 633** Solvent Based Polyurethane Coating

**VITRETHANE 638** Solvent Based Clear Polyurethane Coating

**TREDSEAL** Clear Protective Sealer

**TREDPRIME** Penetrating Surface Primer

Preparing a Concrete Floor

Enviroflake Seamless Flooring

Epoxy Corner Coving

Slip Resistance

Handy Hints for Two Pack Products

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