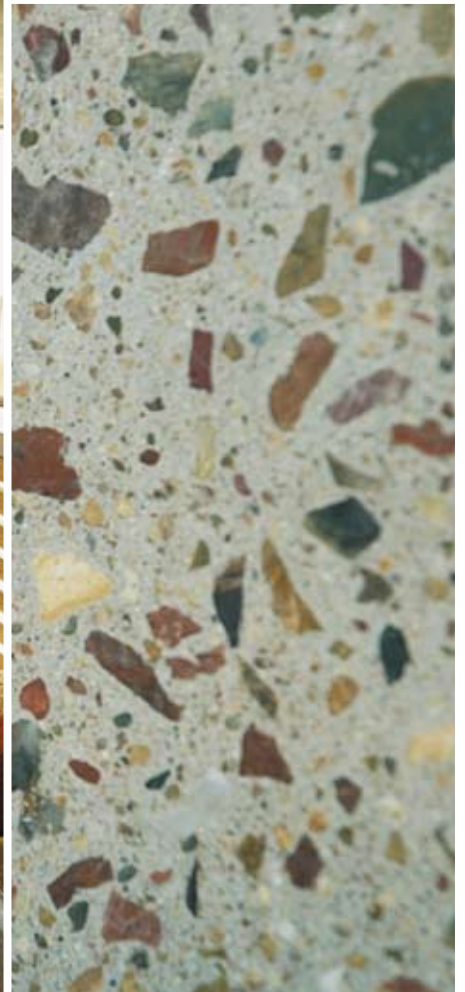




Using ACS Protective Coatings and Sealers on

# Honed Polished Concrete



# What is Honed Polished Concrete?

Honed Polished Concrete is produced by the mechanical grinding of the concrete surface with abrasive pads to remove the cement matrix. The process exposes the stone aggregates and typically provides a smooth, durable and attractive finish. A variety of finishes can be provided, depending on how much aggregate is exposed.

These finishes are achieved by progressively grinding the concrete surface using finer and finer grinding pads.

## How to Choose a Coloured, Honed Polished Concrete Finish

Coloured Honed Polished Concrete is the combination of specifically chosen pigments and aggregates to achieve the coloured concrete mix (usually 32mpa or 40mpa). Once honed, the concrete is then coated with a sealer to achieve the desired final result.

**To choose your coloured mix, you will need to:-**

- 1 Contact your local concrete manufacturer for their selection of aggregates, and;
- 2 Choose a pigment colour from the CCS Colour Pigments range.

If a specific sample of your colour and aggregate selection is required, this should be supplied by the contractor. (Note:- this may take between 6 -8 weeks).



*Once the concrete slab has fully cured, the surface is ground and then polished several times to reveal the colour and stone.*

# Types of Sealers for Honed Polished Concrete.

## Film Forming Coatings

Film Forming Coatings are clear sealers applied to enhance the look of polished concrete. Film-forming coatings form a continuous layer on the concrete surface, thus protecting the concrete surface completely and losing all vapour permeability.

Film Forming Coatings provide either a high to medium gloss or shine to the surface and will tend to darken the colour of concrete. These types of sealers will decrease the slip resistance of the final floor finish and therefore should only be used on internal polished concrete. Generically, film formers are referred to as:-

- Urethanes, and;
- Epoxies.

### Note:

Film Forming Coatings should only be applied by experienced applicators.

## Penetrating Sealers

Penetrating Sealers are applied onto the concrete surface but unlike the coating sealers above, they penetrate fully into the concrete to become part of the concrete matrix. Depending on which product you choose, they can be used to highlight the colour or keep the natural look of the polished concrete.

Penetrating Sealers are usually used for external polished concrete. If used internally the concrete surface must have a very highly honed finish. ACS has two types of penetrating sealers:-

- Silanes, and;
- Silane/Siloxanes.



*This photo demonstrates the difference a penetrating sealer and coating sealer can make to the final appearance and colour of the concrete. The left hand side of this slab has been coated with a penetrating sealer, ACS Stain Block, while the right hand side of the same slab has been sealed with ACS Armour-thane, a coating sealer.*



# Internal Coatings

## ***Decra Max TC – A low yellowing water based epoxy.***

*Decra Max TC* is a high solids, high performance, environmentally friendly, clear water based epoxy. It provides an extremely high gloss finish to honed polished concrete.

*Decra Mac TC* is extremely hard wearing and resistant to chemicals and scratching. However, due to the nature of the high gloss finish, any scratches which may occur, will be very visible. The use of a clear acrylic polish maintenance coat is therefore highly recommended.

### **Uses**

Commercial and domestic floors – particularly recommended for retail and food preparation areas due to its' chemical resistance.

- Wash rooms.
- shower cubicles.
- canteens.

As *Decra Max TC* is water based and emits very low odour, it is ideal for refurbishment work.



*Decra Max TC provides an extremely high gloss finish, while protecting the surface from chemicals, oils and other contaminants.*

# Specification

## For Application of ACS Decra Max TC to Interior Polished Honed Concrete.

### Concrete Surface Preparation:

- 1 Place the concrete surface to best trade practice.
- 2 Allow the concrete to cure for 3 – 7 days prior to the initial grind.
- 3 Mechanically grind the concrete to achieve the desired result. The floor must be ground prior to the application of sealer.
- 4 Ensure the concrete is clean, dry and free from all contaminants prior to the application of *ACS Decra Max TC*.
- 5 The concrete must be cured for 28 days prior to the application of *ACS Decra Max TC*.

### Sealer Application:

- 1 Apply the first coat of *ACS Decra Max TC* in a uniform manner at the rate of approximately 5 -7m<sup>2</sup>/litre. This rate may vary depending on the required finish.
- 2 Once the first coat is fully dry (minimum of 12 hours and a maximum of 24 hours) apply the second coat of *ACS Decra Max TC* in a uniform manner in the opposite direction to the first coat, at the rate of 5 – 7 m<sup>2</sup>/litre.
- 3 Allow the surface to cure for at least 72 hours before subjecting it to pedestrian traffic and seven days before cleaning with chemicals.

### Coating Maintenance:

- 1 Allow the coating to cure for 24 hours before applying *ACS Decra Sheen*.
- 2 Once all trade works are completed, clean the floor to remove all loose material.
- 3 Apply four to five thin coats of *ACS Decra Sheen* using a clean cotton/micro fibre mop or applicator and a clean bucket. All coats must be applied across the direction of the previous coat to ensure even application.
- 4 Allow each coat to dry thoroughly before attempting re-coating or buffing.
- 5 Buff the final coat of *ACS Decra Sheen* to the desired gloss level, using a mechanical buffer.
- 6 For ongoing maintenance refer to the *ACS Decra Buff* technical data sheet.

### Note:

- The above specification should be read in conjunction with the manufacturer's instructions as outlined in the relevant and latest technical data sheets.
- A test sample should be provided and accepted by all parties prior to the commencement of the final floor. This sample should then become the template for the final floor.



## ACS Armour-thane - A solvent based non yellowing urethane sealer.

*Armour-thane* is a 35% solids, high build solvent based urethane that gives a medium to high gloss finish. It is extremely hard wearing, highly resistant to chemicals and has excellent scratch resistant properties.

Due to its reduced gloss level, (compared with *Decra Max TC*), scratches will be less obvious in this coating.

### Uses

- Domestic and retail flooring.
- Commercial flooring.
- Ideal as a wall coating.
- UV stable top coat for epoxy flooring systems.

While *Armour-thane* is easily recoated, it is solvent based, so care must be taken to ensure adequate ventilation is provided.



*Armour-thane* provides a medium to high gloss level and is highly resistant to scratches and chemicals.

# Specification

## For Application of ACS Armour-thane to Interior Polished Honed Concrete.

### Concrete Surface Preparation:

- 1 Place the concrete surface to best trade practice.
- 2 Allow the concrete to cure for 3 – 7 days prior to initial grind.
- 3 Mechanically grind the concrete to achieve the desired result. The floor must be ground prior to the application of sealer.
- 4 Ensure the concrete is clean, dry and free from all contaminants prior to application of *ACS Armour-thane*.
- 5 The concrete must be cured for 28 days prior to the application of *ACS Armour-thane*.

### Sealer Application:

- 1 Apply the first coat of *ACS Armour-thane* (diluted up to 20% with *Armour-thane* solvent) in a uniform manner at the rate of approximately 8 -10m<sup>2</sup>/litre. This rate may vary depending on the required finish.
- 2 Once the first coat is fully dry (minimum of four hours and a maximum of 24 hours) apply the second coat of *ACS Armour-thane* (no dilution required) in a uniform manner in the opposite direction to the first coat - at a rate of 10 – 12 m<sup>2</sup>/litre.
- 3 Allow the coating to cure for at least 72 hours before subjecting to pedestrian traffic and seven days before cleaning with chemicals.

### Coating Maintenance:

- 1 Allow the coating to cure for 24 hours before applying *ACS Decra Sheen*.
- 2 Once all trade works are completed, clean the floor to remove all loose material.
- 3 Apply four to five thin coats of *ACS Decra Sheen* using a clean cotton/micro fibre mop or applicator and a clean bucket. All coats must be applied across the direction of the previous coat to ensure even application.
- 4 Allow each coat to dry thoroughly before attempting re-coating or buffing.
- 5 Buff the final coat of *ACS Decra Sheen* to the desired gloss level, using a mechanical buffer.
- 6 For ongoing maintenance refer to the *ACS Decra Buff* technical data sheet.

### Note:

- The above specification should be read in conjunction with the manufacturer's instructions as outlined in the relevant and latest technical data sheets.
- A test sample should be provided and accepted by all parties prior to the commencement of the final floor. The sample should then become the template for the final floor.



## ACS Decra-thane WB

*Decra-thane WB* is an environmentally friendly, single pack, water based polyurethane specifically designed to meet the requirements of the Green Building Council of Australia's 'Green Star' building code.

*Decra-thane WB* is a low cost multi coat system (3 – 4 coats required), that provides a low sheen finish which only slightly darkens the original colour of the concrete surface. This product is ideal for domestic and light commercial floors.

As this product is a single pack system it is not as hard, scratch or chemical resistant as *ACS Armour-thane* or *ACS Decra Max TC*. An acrylic polish maintenance coat is recommended.

### Uses

- Domestic Flooring.
- Retail.
- Light Commercial (Office foyers and work spaces).

As *Decra-thane WB* is water based and emits a very low odour, it is ideal for refurbishment work.



*ACS Decra-thane WB* is an economical and environmentally friendly coating.



*Decra-thane* will provide a very low gloss finish that only slightly darkens the concrete surface.

# Specification

## For Application of ACS Decra-thane to Interior Polished Honed concrete.

### Concrete Surface Preparation:

- 1 Place the concrete surface to best trade practice.
- 2 Allow the concrete to cure for 3 – 7 days prior to the initial grind.
- 3 Mechanically grind the concrete to achieve the desired result. The floor must be ground prior to the application of sealer.
- 4 Ensure the concrete is clean, dry and free from all contaminants prior to application of *ACS Decra-thane WB*.
- 5 Ensure the concrete is a minimum of 14 days old prior to the application of *ACS Decra-thane WB*.

### Sealer Application:

- 1 Apply the first coat of *ACS Decra-thane WB* in a uniform manner at the rate of approximately 16 -20m<sup>2</sup>/litre. This rate may vary depending on the required finish.
- 2 Once the first coat is completely dry (2 -3 hours) apply the second coat of *ACS Decra-thane WB* in a uniform manner in the opposite direction to the first coat - at a rate of 20 – 25 m<sup>2</sup>/litre.
- 3 Once the second coat is completely dry (2 - 3 hours) repeat the above process at an application rate of 20 – 25m<sup>2</sup>/ltr. If required, apply a fourth coat following the process above.
- 4 Allow the surface to cure for at least 72 hours before subjecting it to pedestrian traffic and seven days before cleaning with chemicals.

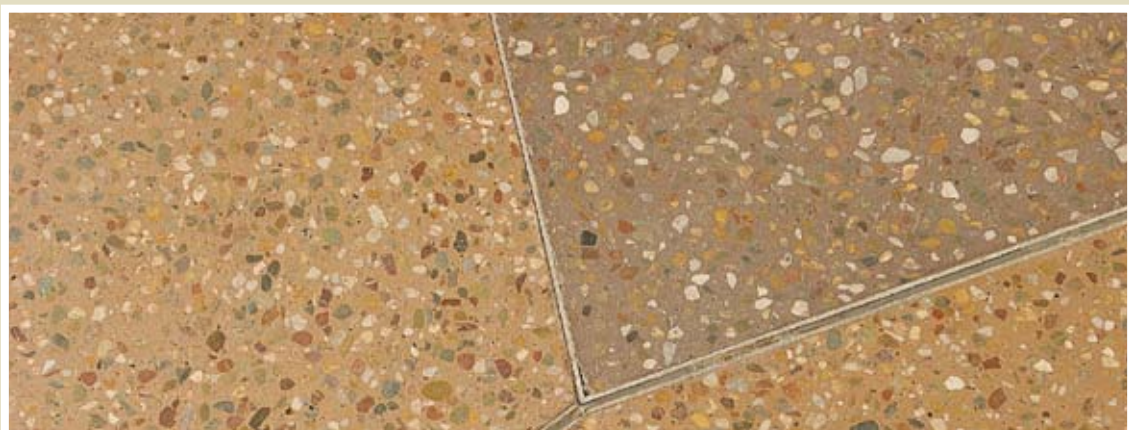
### Coating Maintenance:

Allow the coating to cure for 24 hours prior to the application of *ACS Decra Sheen*.

- 1 Once all trade works are completed, clean floor to remove all loose material.
- 2 Apply four to five thin coats of *ACS Decra Sheen* using a clean cotton/micro fibre mop or applicator and a clean bucket. All coats must be applied across the direction of the previous coat to ensure even application.
- 3 Allow each coat to dry thoroughly before attempting re-coating or buffing.
- 4 Buff the final coat of *ACS Decra Sheen* to the desired gloss level, using a mechanical buffer.
- 5 For ongoing maintenance refer to the *ACS Decra Buff* technical data sheet.

### Note:

- The above specification should be read in conjunction with the manufacturer's instructions as outlined in the relevant and latest technical data sheets.
- A test sample should be provided and accepted by all parties prior to the commencement of the final floor. This sample should then become the template for the final floor.



# External Penetrating Sealers

## ACS Stain Block

*Stain Block* is a high performance, silane based penetrating sealer that provides maximum protection for honed polished concrete.

Treated substrates are effectively protected from the ingress of water borne, oil based and organic stains, thus making the concrete surface easier to clean. *ACS Stain Block* offers a matt finish and - thereby retaining the natural look of the concrete.

### Uses

- Exterior landscape concrete.
- Alfresco dining.
- Residential entertaining areas.
- Exterior areas in hotels and clubs.



*Stain Block is white spirit based and has little to no smell.*



*Stain Block offers a matt finish which retains the natural look of the concrete.*



*ACS Stain Block penetrates deep into the concrete to offer supreme protection against contaminants.*



# Specification

## For Application of ACS Stain Block to External Honed Polished Concrete

### Surface Preparation:

- 1 Place the concrete surface to best trade practice.
- 2 Allow the concrete to cure for 3 – 7 days prior to the initial grind.
- 3 Mechanically grind the concrete to achieve the desired result. The floor must be ground prior to the application of sealer.
- 4 Ensure the concrete is clean, dry and free from all contaminants prior to the application of *ACS Stain Block*.
- 5 All concrete must be a minimum of 28 days old prior to application of *ACS Stain Block*.

### ACS Stain Block Application:

- 1 *ACS Stain Block* should be used straight from the container - no dilution is required or recommended.
- 2 *ACS Stain Block* should be applied in two flood coats until the recommended total application rate of 0.25 litres.m<sup>2</sup> has been achieved.
- 3 Allow 10 - 30 minutes between coats, or apply the second coat once the surface becomes touch dry.

### Note:

- The above specification should be read in conjunction with the manufacturer's instructions as outlined in the relevant and latest technical data sheets.
- A test sample should be provided and accepted by all parties prior to the commencement of the final floor. This sample should then become the template for the final floor.



## Street-scape Seal WB

*Street-scape Seal WB* is a water based, environmentally friendly Silane/Siloxane penetrating sealer specifically designed to meet the requirements of the Green Building Council of Australia's 'Green Star' building code. Treated surfaces are effectively protected from the ingress of water based, oil and organic stains.

### Uses

- Exterior landscape concrete
- Alfresco dining
- Residential entertaining areas.
- Exterior area's in hotels and clubs

As *Street-scape Seal WB* is water based and emits a very low odour, it is ideal for refurbishment work.



*ACS Street-scape Seal meets the Green Building Council Of Australia's 'Green Star' building code.*



*ACS Streetscape Seal offers excellent protection and is ideal for public and commercial precincts, as well as domestic outdoor entertaining areas.*

# Specification

## For Application of ACS Street-scape Seal WB to Exterior Honed Polished Concrete.

### Surface Preparation:

- 1 Place the concrete surface to best trade practice.
- 2 Allow the concrete to cure for 3 – 7 days prior to the initial grind.
- 3 Mechanically grind the concrete to achieve the desired result. The floor must be ground prior to the application of sealer.
- 4 Ensure the concrete is clean, dry and free from all contaminants prior to application of *ACS Street-scape Seal WB*.
- 5 All concrete must be a minimum of 14 days old prior to application of *ACS Street-scape Seal WB*.

### ACS Street-scape Seal WB Application:

- 1 *ACS Street-scape Seal WB* should be used straight from the container - no dilution is required or recommended.
- 2 *ACS Street-scape Seal WB* should be applied in two flood coats until the recommended total application rate of 0.25 litres.m<sup>2</sup> has been achieved.
- 3 For best results, allow a minimum of two hours between coats, but no more than 24 hours.

### Note:

- The above specification should be read in conjunction with the manufacturers instructions as outlined in the relevant and latest technical data sheets.
- A test sample should be provided and accepted by all parties prior to the commencement of the final floor. This sample should then become the template for the final floor.



# How do I Specify Honed Polished Concrete?

- 1 Choose the desired finish based on information provided, or contacting your local ACS Representative. Coating specifications can be provided on request.
- 2 Choose the concrete mix/specification.
  - Material shall comply with AS 1379.
  - Concrete strength shall be S32 or S40 (unless otherwise detail by an engineer).
  - Slump shall be 80mm  $\pm$  15.
  - Concrete can be provided as a structural or topping slab. Depth shall be in accordance with engineer's specification.
- 3 Choose the aggregate. The volume of aggregate is important (ie:- the aggregate ratio is higher than standard concrete - normally between 1100-1200kg per m<sup>2</sup>)
- 4 Choose your pigment colour from the CCS Colour card.
- 5 Choose your final sealer finish.
- 6 Once the applicator has been appointed, ask for a test sample to be cast. ACS recommend testing the sample to ensure it meets the AS/NZS 4586 Slip Resistance requirements as laid out in the Standards Australia Handbook HB 197: 1999. The concrete should be placed in accordance with AS3600.
- 7 The above test sample should become the template for the finished works. The finished works should also be tested to ensure it meets the above standard.



# General Specification Notes

## Coatings

- Coatings such as urethanes and epoxies should only be used on internal honed polished concrete as they will increase the slipperiness of external concrete.
- ACS do not recommend the use of coatings on exterior hone polished concrete.



- External honed polished concrete should only be ground to a 60 grit. Only use penetrating sealers on external concrete.
- Where coatings are applied, internal concrete should be ground to a 120 grit finish, and all holes and imperfections should be grouted prior to application of sealers.
- Grouting is a mixture of cement, colour pigment (to match floor colour) and acrylic modified polymer. This mixture is troweled or 'squeegeed' across the floor to fill all the imperfections and holes. Once this mixture is sufficiently dry it is removed using the grinding machine.
- Ensure a slip test is carried out on the test sample and the final floor finish.



All holes and imperfections which appear after grinding can be filled with a special grout mix.

## Concrete

- Coloured concrete should be ordered in even cubic metre loads to reduce colour variation.



- Ensure no water is added to the concrete mixture once on site.
- Concrete should be placed in accordance with the relevant Australian Standard AS 3600.
- Some colour variations can be expected as concrete is produced from natural products.
- Concrete should be cured for 3-7days prior to grinding.
- Provide slip testing to ensure the surface meets Australian Slip Testing (AS/NZ 4586 Handbook 197:1999).



Manufactured by River Sands Pty Ltd

**Head Office/Plant**

683 Beenleigh-Redland Bay Rd,  
Carbrook Qld 4130

Ph 07 3287 6444

Fax 07 3287 6445

**Sales Offices**

Nerang 07 5596 2399

Geebung 07 3865 6888

Sydney 02 9677 1056

Melb 03 9311 9225

Toll Free Helpline 1800 077 744

[www.appliedconcretesolutions.com.au](http://www.appliedconcretesolutions.com.au)

