BG Coating Concrete Range	The range is mainly used for the Sealing of Exposed Aggregate, Limestone, Pattern Concrete and most types of paving, in order to help protect against dirt, mould, oil, petrol, tyre marks and other visible build up. The use of clear and coloured coatings and sealers on plain and decorative concrete has become very popular today. It is a simple, attractive and cost effective way of decorating and protecting concrete paving, driveways, garages, floors and factories. The purpose of the coating include; • Clear: Enhancement and restoration of natural substrate colours. • Colours: Designed to recolour, rejuvenate, seal and protect new and old stained concrete and paved surfaces. • Due to the exceptional chemical resistance which the range offers, it is highly recommended for applications where resistance to mild alkalis and most petrochemicals are required. IMPORTANT – BEFORE PAINTING: Follow all instructions in this application guide prior to painting. Failure to follow instructions could result in coating failure. Observe all Occupational Health and Safety (OH&S) precautions. Refer to the relevant Technical Data Sheets (TDS) and Safety Data Sheets (SDS) for product specific and safety related information.
Surface Preparation Provisions:	APEX is not suitable to be used as an overcoat for Standard Enamel and Epoxy floor finishes. Test the existing surface finish as follows: 1. Drop ± 50 ml. Acetone in an area where the coating is in good condition... 2. Allow for 2 - 3 minutes contact, and then rub the liquid into the surface with a cotton swab to observe reaction with the coating. Several test areas should be performed for best results. Possible reactions: a) If the coating becomes tacky and if coloured some might come transferred to the cotton swab. If the surface then dries hard in 15 - 30 minutes it indicates that the existing coating is a solvent based acrylic similar to APEX - Heavy Duty Concrete Sealer. The coating should be OK to recoat with APEX. * A small test section is however recommended prior to commencing with projects. b) If the coating wrinkle and strip off the surface it may be considered to be an Enamel Paint. It must either be removed or recoated with Enamel paint. c) If the coating is removed from the surface and gum up in the form of soft flexible slivers and balls the surface may be considered to be a Water Based Coating. APEX - Heavy Duty Concrete Sealer may adhere to such a coating. * A small test section is however recommended prior to commencing with projects. d) If no reaction occurs it indicate that the existing coating is a two pack coating such as either Polyurethane or Epoxy. It must then be recoated with another two pack coating.

Preparation:

All surfaces need to be completely clean and free of all debris and foreign matter prior to sealing. Pressure cleaning (≥2000 psi) is advisable as the first coat is the key' which provide sound bonding and adhesion for subsequent top coating to follow.

Decorative Paving and Driveways

- Ensure that Fungi, moulds, moss and lichens are removed and treated in an appropriate manner. Use 1 part household bleach to 4 parts water or proprietary product available. Allow to react for a minimum of 2 hours.
- Degrease with appropriate degreaser.
- High pressure water wash to ensure complete clean surface, free of debris and foreign matter prior to sealing.

New or unpainted concrete:

New concrete should not be painted for 4 weeks after construction has been completed in order for concrete to cure completely. It takes 4 weeks for concrete to cure and moisture to evaporate. It may take up to 8 weeks, depending on ambient conditions for the process to complete and to achieve <5% substrate moisture to coat.

- Remove all contamination, laitance and loose surface matter by grinding, grit blasting or hand rubbing with a timber block.
- Clean, bare concrete surfaces should be acid etched with appropriate Concrete Etch or a mixture of Hydrochloric acid mixed with clean water.

• Acid etching requires neutralisation as a further step, to render the surface ready to ensure product performance...

- Acid neutralisation may be achieved by treating etched surfaces with a mixture of Bicarbonate of Soda and clean water, followed by a high pressure water wash.

Unpainted concrete

- Remove all contamination, laitance and loose surface matter by grinding, grit blasting or hand rubbing with a timber block.
- Degrease with appropriate degreaser.
- Clean, bare concrete and degreased surfaces should be acid etched with appropriate Concrete Etch or a mixture of Hydrochloric acid mixed with clean water.

• Acid etching requires neutralisation as a further step, to render the surface ready to ensure product performance...

- Acid neutralisation may be achieved by treating etched surfaces with a mixture of Bicarbonate of Soda and clean water, followed by a high pressure water wash.

* *Once surface preparation guide lines have been followed moisture content of the of the substrates must follow ...*

- For best results check the surface moisture levels with a hygrometer is recommended. The moisture content should be <5%
- Alternatively a 300 x 300mm piece of clean plastic film can be taped on the surface and to check for condensation after 24 hours. If condensation or sweat is observed under the plastic, the surface is not dry enough to paint. The

surface must dry for at least 7 days after cleaning before paint can be applied. High moisture content can cause premature failure with the system performance attributes.

Application

Equipment Type

Roller and Brush subject to suitably prepared surfaces, condition and density of the substrate to be coated.

- 230mm x 9mm nap Solvent resistant roller.

Mixing

Mix components well with a flat paddle or power agitator until completely homogeneous. Remix thoroughly before application.

For colour applications mix 13 lt. APEX Heavy Duty Concrete Sealer Clear with 2 lt. Colour tint. Ensure that a homogeneous colour is achieved during application, without any colour streaking.

Application Environment

Surface Temperature	Ambient Temperature	Relative Humidity
Min: 10 °C	Min: 10 °C	Min: 10%
Max: 40 °C	Max: 40 °C	Max: 85 %
• Or minimum 3 °C above dew point.		
• Substrate - <5% moisture content.		

Dilution Ratios (1st Coat)

Previously Sealed Compatible Surfaces: 0 - 10%

Rough Stipple Finish Concrete: 20%

Hardened, Topping Coloured or Smooth Steel Trowelled Concrete: 50%

Dilution Ratios (2nd Coat)

RFU - No thinning required.

Note:

- More than two coats may be required on very porous concrete or when over coating dark surfaces.
- A 3rd coat is recommended for additional protection in high traffic areas e.g., where exposed to Forklift travel.

Drying Times

Touch dry: 30 min @ 25°C

Recoat: 2 - 4 h @ 25°C

Walk able (light traffic) - 24 h.

Full cure: 7 days.

* Drying times will be extended at cooler temperatures and high humidity.

* Do not park vehicles with hot tyres or place heavy items on fresh applied APEX Heavy Duty Concrete Sealer for at least 7 days.

Ensure that the <5% moisture content rule is strictly adhered to during the preparation and painting process. If excessive, high moisture content would result to substrate/ adhesion failure, milky films and blistering or bubbling.

Coverage/ spreading rate
Approximately 4 to 6m² per litre per coat. This coverage depends on the porosity of the substrate. The first coat will penetrate and then the subsequent coats should require less sealer.

AntiSlip
In areas of high traffic ability or slight incline where added traction and slip resistance are required BG Coatings - Anti slip additive should be used.
It is ideally suited for areas with less than a 5° incline, such as wet areas, driveways, entrance foyers, access ramps, factory loading docks, vehicle and pedestrian areas.

- Anti Slip Additive is only required as an addition to the final finishing coat.
- Mix 120 grams Anti slip additive into 20 lt. APEX - Heavy Duty Concrete Sealer.
- Stir well until completely incorporated and homogeneous.
  Ensure that the blended material is agitated during application.

General Guidance

Fungi, mould, moss and lichen removal:
Use 1 part household bleach to 4 parts water or proprietary product available. Allow to react for a minimum of 2 hours.

Degreasing:
Degrease with appropriate degreaser.
- Apply by plastic watering can or pump spray pack, liberally to soiled area.
- Allow the solution to activate on the surface for a minimum of 5 minutes. For heavy soiling up to 2 hours.
- High pressure clean with a recommended minimum water pressure of 2000 psi.

Preparation and application of Acid Etch Solution:
The following concentrations are recommended:

Acid Concentration :	Water	Acid
- Rough Stipple Concrete	3 Parts	1 Part
- Smooth Steel Trowelled Concrete	2 Parts	1 Part
- Hardened or High MPa Concrete	1 Part	1 Part

- Always add acid to water and use plastic containers to prepare and apply.

Whilst acid etching proper protective equipment must be used: Gloves, goggles, mask for fumes, long sleeve and full length pants, and shoes are a minimum requirement.

1. Dampen the concrete by spraying water slightly with a hose so that the concrete is wet but not puddling with water.
2. Use a plastic watering can to spread the acid solution as evenly as possible without much splashing. Scrub with a nylon brush or broom. The acid solution will start to bubble slightly (effervesce) as it is working on the surface. When bubbling stops, usually after 10 - 15 minutes, hose down with plenty of clean fresh water making sure all acid solution residue is removed.

Always work in small areas at a time. This will prevent the acid from drying on the surface. This process may have to be repeated until the concrete stops reacting when the etch solution is applied.

Properly prepared surfaces should feel and appear like fine sand paper when finished.

Neutralisation of Concrete surfaces etched with Hydrochloric acid solutions:

Once the entire surface has been effectively etched it must be neutralised with a solution of Bicarbonate of Soda and Water (10 litres warm water and 1 Kg Bicarbonate of Soda). Flush the surface with the neutralising solution and then follow with copious amount of fresh water thereafter. To ensure that no bicarbonate of soda deposit remains on the surface it is important to concentrate on small, workable sections at a time.

Refer to:
Relevant TDS's and SDS's sheets in regard.

DISCLAIMER:
The recommendations contained herein are given in all good faith and are meant to guide the specifier or the user. They are based on results gained from our tests and experiences and are believed to be reliable. No guarantee is implied by the recommendations contained herein since conditions of use, method of application and cleanliness of the substrate prior to painting are beyond our control.

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