

Exposed Aggregate Datasheet

January 2022

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Exposed Aggregate mix is a thin decorative stone cementitious bound system.

Technical Data

Type	Cementitious decorative aggregate coating
Colour	See website: www.cemcrete.co.za
Pot life	45 minutes
Working time	45 minutes
Initial set	1 hour
Touch dry	3 - 4 hours depending on weather
Mixing water temperature	10°C and 25°C
Application temperature (ambient)	6°C to 25°C
Substrate temperature	6°C to 25°C
Application thickness	8mm
Density	1.8kg/ litre
Protection during application	Use wind and sun barriers to prevent premature moisture loss

Purpose

To provide a decorative exposed stone finish for external floors such as patios, walkways, boma's and pool surrounds. This product is ideally suited for external residential and commercial applications for example al fresco areas of retail shops, restaurants and parks, etc. where minimum maintenance is required with a decorative finish.

Benefits

- Durable
- Aesthetically pleasing
- Easy to clean and maintain
- Abrasion and impact resistance

Limitations

- During application ambient temperature must be higher than 5°C
- Protect from freezing for at least 6 hours after application
- The product must not be laid over existing expansion, control or isolation joints. These must be honored and followed through to the surface
- Existing cracks must be suitably repaired and structural cracks fixed at the source of the problem
- Use only on surfaces that are sound, not friable, clean, and completely dry
- Use sun and wind barriers to prevent rapid drying
- All surface beds should have damp proof membrane. If there is no damp proof membrane present under the concrete base then precautions need to be taken to prevent rising damp from below. Please consult with Cemcrete's technical department on this matter.

Site Work

Storage

Can be stored up to 6 months after date of invoice when stored in a dry area, off the floor, in unopened original packaging.

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Site preparation

Joins and cracks

If the application area is larger than 10m², it is advisable to create control joints to allow for expansion and movement of the new surface and to improve the ease of application. Existing joints and moving cracks must be used as the basis for laying out the control joints. If no existing joints or cracks are present a control joint should be made every 3 meters. Control joints should also be considered at 3m intervals in long narrow passages and across doorways.

Masking

Mask all areas where there is a risk of splashing and staining and where straight edges are required.

Surface preparation

New concrete surfaces

New concrete surfaces must be wood floated and fully cured for 28 days prior to application of **Exposed Aggregate**. The surface must be structurally sound, level, clean, dry and free from any curing agents, laitance and surface contamination such as dust, dirt, waxes, oils, old adhesives, grease, sealants, weak cement screeds etc. which may interfere with adhesion. All holes and damaged areas must be repaired prior to the application of **Exposed Aggregate**. It is suggested to first prime shallow holes with Concrete Primer prior to patching. For larger holes use a suitable repair mortar. Application over moving joints or cracks can result in cracking and delamination. Cemcrete's PrimerCote mixed with FlexBond (diluted 1:3 with water) to a stiff paste can be used to patch with. The surface, once repaired, must be primed with PrimerCote as per its datasheet. All construction, cold joints, structural joints and/or structural cracks which may be dynamic before and/or after the **Exposed Aggregate** application must be extended through to the surface of the **Exposed Aggregate** application in the form of voided joints. All voided joints including saw cuts should be filled with suitable joint filler where applicable.

Existing surfaces

Existing surfaces should preferably be ground with a grinder to remove surface residues and to expose the true condition of the substrate. A mechanical key similar to the profile of a wood floated surface is suitable for bonding purposes. Ensure that all cracks, holes and loose areas are properly repaired before application. Refer to new surface prep for detail on repairs. Once all repairs have been done, apply PrimerCote as per its datasheet prior to the application of the **Exposed Aggregate**. Note, all construction, cold joints, structural joints and/or structural cracks which may be dynamic before and/or after the **Exposed Aggregate** application must be extended through to the surface of the **Exposed Aggregate** application in the form of voided joints. All voided joints including saw cuts should be filled with suitable joint filler where applicable.

Application

Step 1: Prior to mixing, ensure all 8mm dividing strips are installed correctly. Working a single control joint area at a time, apply Cemcrete's PrimerCote in accordance with the manufacturer's instructions. Allow to dry overnight. The following day, prior to applying the **Exposed Aggregate**, apply a single coat of Concrete Primer. Once this is tacky apply the **Exposed Aggregate**.

Step 2: Add 2 to 2,4 litres of clean potable water to a 20kg bag of **Exposed Aggregate**. Mix thoroughly using a mechanical mixer, until a uniform consistency is achieved. Apply the mixed **Exposed Aggregate** to a thickness of 8mm with a suitable steel trowel. Ensure the **Exposed Aggregate** is floated level with the guide strips using a straight edge and then steel floated smooth. Only mix enough material to cover each panel floated flush to the guide strips. Avoid dry joints by completing the application within the entire control joint panel in a continuous operation. Repeat steps 1 & 2 until all areas are completed. Note, no panels should be left partially filled as cracks will appear when the new **Exposed Aggregate** is applied at a later stage.

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Step 3: Application of the retarder

The retarder must be shaken before use and frequently agitated during use. Spraying is preferably done using an airless spray gun with a medium tip nozzle between 1,2mm and 2,5mm. The **Exposed Aggregate** must have no bleed water on it prior to the application of the retarder. Should there be any glistening bleed water present, wait between 30 to 60 minutes for the moisture to subside. The retarder can then be carefully covered with plastic to prevent rapid drying. The retarder should be sprayed at a rate of 200ml per m² which will leave the surface glistening.

Being colourless in nature, a second person can assist the person spraying, ensuring the whole floor is sprayed evenly.

NOTE: Do not re-trowel over areas sprayed with retarder. Do not over-spray retarder onto areas that still need to be worked on.

Step 4: Exposing of the aggregate

It is essential to first carefully test a small section as to its suitability under washing conditions. Warm weather will speed up the setting time whilst cold weather will delay the setting of the product (therefore premature washing could damage the surface).

The area should be washed using a portable high-pressure water washer with a wide slit nozzle and assisted with a nylon brush or broom. This will assist in the exposure of the decorative stones. The nozzle should be kept 20 to 40cm away from the surface and sprayed at a 45 degree angle.

Exposing time after application of the retarder:

Leave the floor covered with plastic for at least 3 days in summer and 4 to 5 days in winter. Then do the test and wash as above.

Curing

Acid wash the surface to clean the aggregates. Dilute Hydrochloric pool acid with 5 parts water and brush the surface with a soft broom for 5 minutes. Rinse the floor with Sodium Bicarbonate mixed with 10 parts water after acid washing then allow to dry completely before applying Cemcrete's Densifier (potassium based). For best results apply the Densifier 7 days after application. Spray the Densifier to a point of saturation but do not allow the liquid to pool. If there is pooling, remove excess with a sponge. Allow the Densifier to react for 20 minutes. If sections start to dry out re-wet them with additional Densifier.

Rinse off the floor to remove excess Densifier.

Sealing

Once the **Exposed Aggregate** has been cured and densified ensure the surface is dry using a suitable moisture meter prior to sealing. Moisture level should be a maximum 5% prior to sealing with relevant sealer(s).

Coverage

20kg **Exposed Aggregate** will cover $\pm 0.8\text{m}^2$ at 8mm thick.

1 litre retarder will cover 5m².

Packaging

Supplied in 20kg bags.



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Colours

Please refer to our website: www.cemcrete.co.za for the updated colour choices. It is important to remember that final colours may differ from those depicted on the colour charts as a result of factors such as site conditions and choice of sealer etc. It is important to base your final decision on samples applied by the same contractor and under the same conditions as is governed by the relevant contracting parties. We recommend two samples should be made by the contractor, one for the client and one as a retained sample.

Manufacturer's Warranty

Cemcrete warrants that the products manufactured by it shall be free from material defects and will be consistent with its normal high quality. Should any of the products be proven defective, the liability to Cemcrete shall be limited to replacement of the product ex-factory. Cemcrete makes no warranty as to merchantability or fitness for a particular purpose and this warranty is in lieu of all other warranties expressed or implied. The user shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith.

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