BeadCrete Datasheet

November 2020

BeadCrete is a factory-blended ready to use aggregate render for use on reinforced concrete pool interiors. **BeadCrete** produces a significantly superior aesthetic appearance. The finish is not coarse for low risk of skin abrasions and is easily applied on new or renovated pool interiors by competent tradespersons.

Recommended use

BeadCrete's main purpose is for the application onto concrete pool shell interiors. It is engineered from silica-free pure glass beads, blended aggregates and polymer modified cement technology that produces excellent durability and minimal maintenance of the finished product under normal in-service pool conditions. It is a specifically good way to differentiate the finishing on martini seats and step areas.

Technical Data

Type	Ready to use aggregate pool render
Colour	See website : www.cemcrete.co.za
Pot life	20 - 30 minutes
Working time for mixing	20 - 30 minutes to apply to substrate
Initial set	1 hour
Filling of pool	See BeadCrete Start-Up Guide
Mixing water temperature	6°C to 25°C
Application temperature	6°C to 25°C
Substrate temperature	6°C to 25°C
Application thickness	8mm
Density	1.66kg/litre
Protection during application	Use wind and sun barriers. No contact with product

Features & Benefits

- Cost competitive replacement for traditional exposed pebble finishes
- Modern – white and coloured surface aesthetic with coloured chip and reflective additives that enhance pool water appearance
- Factory blended for consistent quality
- Strong & durable – Low maintenance
- Smooth textured finish reduces risk of skin abrasion and gently massages under the feet
- Easily placed and finished by competent tradespersons
- Suitable for new concrete pools & renovations

Precautions & Limitations

BeadCrete cannot be installed in wet weather or afterwards for a period of at least 48 hours. Precautions must be taken when ambient temperature is outside the range of 6°C to 25°C. High ambient temperature when combined with strong wind and low humidity risks uncontrolled drying shrinkage. Until hard-set has occurred freshly finished surfaces must be protected from rain or damage from other sources. **BeadCrete** is recommended for use only by professional tradespersons in accordance with the manufacturer's approved method. The pool needs to be fully operational immediately following product application and final detailing. The finished coating is specifically designed to be submerged in water to maintain colour stability. Use of water-line border tiling is recommended and anywhere the finished coating is exposed to weather elements to preclude colour variance from the effects of UV light and wetting/drying cycles

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Surface Preparation

- All surfaces should be level, hard and slightly rough to form a mechanical key. Dirty surfaces, particularly on the floor, should be acid-washed and vigorously brushed and flushed with plenty of clean water.
- Ideally a row of mosaics should be placed just above the curve where the wall meets the floor, thus the wall application can be isolated from the floor application ensuring no run off of the acid wash onto the newly laid **BeadCrete** on the floor. Complete the wall in its entirety first then start the floor.
- When the surface has been prepared as above, apply a slush coat comprising Cemcrete's Pool Plaster Primer in a solution of 1 volume FlexBond and 4 volumes water. Mix slush well and stipple onto the plaster using a block brush, soft carpet brush or broom. Allow slurry coat to harden for a day.

Coverage

To ensure durable and uniform coverage, **BeadCrete** must be applied at a consistent thickness of 8mm. One 20kg bag of **BeadCrete** mixed with the recommended maximum water content of 3 - 4 litres of clean water will cover approximately 0.9m^2 per 20kg. An average sized pool (9m x 4m x 1.5m) might normally require 70 - 75 (20kg) bags of product to ensure sufficient and uniform coverage.

Note: Coverage estimate is a guide only. Variation may or will occur subject to preferred water mix design, application method and finishing techniques of tradespersons, waste factors and scope of the works.

Mixing

- **DO NOT** mix in the pool. Mix in suitably sized plastic drums.
- Mechanical mixers must be used and must be clean.
- Maximum water content per 20kgs of **BeadCrete** must not exceed 3 - 4 litres.
- Calcium Chloride can be added to the mixing water at a rate of 20g per litre when the setting time needs to be accelerated i.e. due to cold weather.
- Keep mix batches as consistent as possible, **DO NOT** use hose pipes, water must be measured out.

BeadCrete application

- Protection from the elements incorporating sun and wind barriers are essential to prevent rapid drying.
- **Care** should be taken not to remove the slurry coat. We suggest the applicators have sponge taped to their boots and knee pads to protect the surface. Do not wet the slurry coat before applying **BeadCrete**.
- If some of the slurry coat comes loose be sure to sweep this away prior to applying the **BeadCrete**. Best to have someone permanently sweep as they apply to keep the surface clean.
- Apply the **BeadCrete** to the surface with a steel trowel forcing it onto the surface. If the **BeadCrete** is easy to trowel it is most probably too wet, it should be quite hard to work. Be sure to keep an eye out for **bubbles** below the surface. These need to be cut with the trowel and re-floated to remove the air. Throwing the plaster onto the surface can cause bubbles, best to trowel it on with force.
- Use a gauge to check the thickness of the **BeadCrete**. A thin nail can be used marked at 8mm with some masking tape. **Each plasterer must have one to check as he plasters.** Add or remove beadcrete as is required to get to 8mm thick.
- Once the **BeadCrete** has started to set, weather dependant, the surface needs to be sponge floated (Rhinolite floats) to flatten the surface. The plasterers should have sponge taped to their boots and knee boards to spread their weight and protect their knees.
- A high pressure washer is then used to wash the plaster off the beads. **DO NOT** spray too close as this will damage the plaster. Once sprayed steel float again. The process of both spraying, and then steel floating, pushes the beads closer together to get a tight grouping of beads. Repeat this step till a tight grouping is achieved. Then use normal bath sponges to clean the surface. **If the BeadCrete starts to get soft and break up it is not ready for the above process – wait a bit longer.**

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Final Detailing – Acid Washing

Be sure to handle the acid with care. Pool acid (hydrochloric acid) is used diluted as mentioned below. Always add the water to the bucket first then the acid, NEVER the acid first. Use suitable gloves, eye and body protection and acid vapour suitable respirators.

- The finished pool interior must achieve hard set to the point where normal acid washing processes will not damage or weaken the surface. Acid washing procedures should be in accordance with recognised method and only attempted by contractors experience in the proper technique and safe use of relevant acid solutions. Environmental protection must be observed at all times. Acid solution mix ratio might normally be diluted at the rate of 1 part hydrochloric acid mixed with 3 - 5 parts clean water.
- Use a soft bristled broom and brush the surface with the acid / water solution.
- For walls start at the deep end and work up the wall, for floors start in the deep end. Be sure to remove run off from the pool with a submersible or suitable pump placed on the surface in the deep end. Sponges can be used further to remove the residual water.
- Allow to react for as long as required then rinse with the pressure washer.
- Thoroughly rinse surfaces after acid washing. Ensure pool interior is completely clean and the exposed surface finish is uniform and consistent throughout the entire work. Re-treat and detail inconsistently finished areas if necessary. Immediately fill the pool with clean water on the satisfactory completion of the work.

Packaging & Storage

BeadCrete is packaged in 20kg bags and must be stored undercover, above ground and protected from water damage. Shelf life is 6 months from date of invoice.