

# DÉCOR EXPOSED-AGG™

## ***Specification Guidelines for DÉCOR PEBBLE™ Exposed Aggregate Concrete Surfaces ( Seeding Method )***

### **1. General**

This section shall apply to all surface finishes indicated as “exposed aggregate” on the plans. The contractor shall furnish a ( 1 x 1m ) sample panel for approval by the architect prior to construction of the designated areas. This panel shall be made from samples of the specified material using the methods and workmanship proposed for the project. Source, type, colour, and range of gradation of the select seeding aggregate shall be obtained from the architect prior to construction of the sample panel. The approved panel shall constitute an example of the minimum workmanship for all work specified under the section. If the sample panel is disapproved, additional sample panels shall be made until approval is obtained. The approved sample panel shall be kept at the jobsite for comparison with the finished work.

### **2. Concrete**

All concrete to receive an exposed aggregate surface shall contain cement to comply with *AS3972*. The size of the largest aggregate of the base mix shall be in 19mm. Ready mixed concrete, if used, shall comply with *AS1379 Specification for Ready Mixed Concrete*

Aggregate source and cement type and brand shall not be altered once construction begins. The slump of the concrete shall not exceed 125mm.

For guidance on ordering and specifying concrete, refer to the APMCA Technical Bulletin “ Guide to Specifying Concrete” available from their website [www.apmca.com.au](http://www.apmca.com.au)

For integrally coloured concrete, only approved colouring oxides are to be used at addition rates according to manufacturer’s directions.

### **3. Seeding Aggregate**

The aggregate to be used in seeding shall be DÉCOR PEBBLE™ (...insert colour...) sized .....mm as supplied by The Pebble-Mix Company P/L, East Burwood – Victoria, which shall be hard, sound, durable, and free of all deleterious materials and staining qualities. The DÉCOR PEBBLE™ seeding aggregate shall be supplied in sealed 20 or 25kg clear plastic bags. The colour and size of the aggregate shall be selected by the architect and shall match that of the test panel. Flat, slivery stones shall not be used.

### **4. Subgrade Preparation**

The subgrade shall be compacted to a uniformly dense surface and shall be in a moist condition (no standing water) at the time of concrete placement.

### **5. Forms**

Forms shall be clean and free from all extraneous substances and comply with provisions stated in *AS3610* and as detailed in the architect’s notes.

### **6. Joints**

Contraction joints shall be located as indicated on the plans. If joints are sawed, the depth of the cut shall be one fourth of the slab thickness. Sawing shall be done as

soon as the surface is firm enough not to dislodge any of the exposed aggregate.

### **7. Aggregate Preparation**

Prior to the concrete placement operation, all selected aggregate shall be washed thoroughly so that is free of all dust, dirt, and clay particles. The aggregate shall be in damp condition but without free surface water at the time of seeding application. There shall be sufficient select aggregate on hand to complete seeding once it has started.

### **8. Placement of Concrete**

The architect shall be notified of the concrete placement sufficiently in advance of the start operation to allow the architect’s representative to complete preliminary inspection of the work, including subgrade, forms, and reinforcing steel, if used. Normal concrete placement procedures shall be followed. Concrete shall arrive at the jobsite so that no additional water will be required to produce the desired slump. When conditions develop that require addition of water to produce the desired slump, permission of the architect’s representative must be obtained. If the concrete is integrally coloured by the addition of pigments, any water addition will change the final appearance colour. Water additions therefore must only be used as a very last resort. The concrete shall be transported from the mixer to its place of deposit by a method that will prevent segregation or loss of material. Concrete shall be consolidated by suitable means to eliminate voids and pockets. The strikeoff and bullfloat operations should be such that a level surface is obtained sufficiently below the final finish grade to allow for volume growth due to addition of seeding aggregate.

## 9. Seeding and Embedment

The seeding operation shall start immediately after placement of concrete as described above. The select aggregate shall be carefully and uniformly seeded by suitable means so that the entire surface is completely covered with one layer of stone. Stacked stone as well as slivery particles shall be removed at this time. The aggregate shall be embedded by suitable means. Under no circumstances shall areas lacking in mortar be filled with small quantities of the base concrete mix.

## 10. Exposing the Aggregate

When the concrete is hard enough to retain the embedded aggregate and the mortar is still soft enough to be removed by brushing, the surface shall be brushed and flushed with water. The exposing operation of washing and brushing with a stiff bristle broom is continued until the surface matches the approved sample panel. The final washing operation shall cease when the flush water runs clear and there is no noticeable cement film on the aggregate. Work shall be planned so that the concrete placing and aggregate seeding procedures are coordinated with the capabilities of the washing and brushing crew.

When a surface retarder is used, it must be approved by the architect and be of the same brand used to prepare the approved sample panel. The retarder shall be applied uniformly over the concrete surface in accordance with the manufacturer's instructions.

Care must be taken to ensure that run-off waters are treated in accordance with local by-laws and regulations. It is the responsibility of the Concreter and architect's representative to confer on this matter prior to commencement of the entire operation.

## 11. Curing

As soon as the washing operation ceases, the curing operation shall begin. The concrete shall be kept in continuously moist condition by wet coverings, plastic sheeting, or continuous saturation by sprinkling, for 7 ( seven ) days. The temperature of the concrete shall not be allowed to fall below 10°C during the curing period.

## 12. Acid Wash ( optional )

After the slab is cured and *no sooner* than two weeks after the concrete has been placed, cement film shall be removed from the surface of the aggregate by acid wash. Delaying the acid wash additional time is permissible, in fact, desirable. The slab shall be saturated with water, brushed free of standing water, and washed with a 5 to 10% solution of Muriatic Acid. Several flushings with clear water should follow the acid wash. The above procedure shall be followed until the surface matches the approved sample panel.

Care must be taken to ensure that run-off waters are treated in accordance with local by-laws and regulations. It is the responsibility of the Concreter and architect's representative to confer on this matter prior to commencement of the entire operation.

## 13. Sealer ( optional )

After the slab is completely dry, a clear, non-yellowing acrylic sealer shall be uniformly applied to the surface according to the manufacturer's directions.

## 14. Colour Pigments ( optional )

The pigment to be used shall be Coloumix™ (...insert colour...) as supplied by Cathay Pigments Australasia Pty Ltd. The pigment shall be added at a rate of 10kg per cubic metre or as otherwise directed by manufacturer.