# AUAV00073 Dulux Avista Natural Stone Look Flakes with Dulux Avista Polyaspartic on New Concrete floors [Interior]

## Substrate and Substrate Preparation

### Substrate Notes

Concrete is a mixture of Portland cement, fine and coarse mineral aggregates, water and admixtures. Concrete floor slab construction consists of concrete poured into formwork in which reinforcing steel had been laid. The formwork (usually timber) holds the slab together as the concrete cures. The concrete should be kept wet according to best practice methods to allow the cement to fully hydrate during the curing process of 4-6 weeks to allow it to reach its design strength. Methods include ponding, wet hessian, wet sand or plastic sheet. If allowed to dry out prematurely, concrete will develop laitance, a weak, friable layer on the surface.

A waterproofing membrane should be laid underneath the slab to prevent moisture from rising up from the soil through the slab and causing efflorescence. The presence of laitance or efflorescence will interfere with coating adhesion.

### Substrate Preparation Notes

**Assess suitability**
Concrete must be placed, compacted and cured in accordance with good building practice for 28 days minimum. Examine the floor for the presence of dirt, oils, grease, curing agents, laitance, efflorescence and other surface contaminants. If a wax based curing compound had been used, coating of the concrete is not recommended as the wax prevents adhesion to the concrete. Check the extent of cracks, voids, mechanical damage and other imperfections.

**Clean surface**
Remove all surface and subsurface contamination using by a cleaning method appropriate for the contamination type encountered. For example, remove dirt, dust, grease or oils by washing with a free-rinsing, alkaline detergent such Gamlen CA 1 in strict accordance with the manufacturers written instructions and all safety warnings. Pay attention to expansion joints. Thoroughly rinse with fresh potable water to remove all detergent residues. A clean surface is indicated when the rinsing water wets out the surface instead of beading on the surface. Repeat until the surface is clean. Allow surface to dry.

**Repair surface imperfections**
Thoroughly and completely clean out, rout out (as required) and fill cracks, voids or other imperfections with a two-pack epoxy repair paste such as Fosroc Nitomortar AP® in strict accordance with the technical data sheet.
Do not fill expansion joints with any rigid fillers. Leave these until after the floor is painted.
Note: Do not overcoat epoxy repair mortars with any clearcoat in areas exposed to UV; UV exposure will cause chalking of the epoxy surface and potential delamination of the coating system.

**Abrade surface**
Diamond grind, blast-track or mechanically abrade concrete floors in strict accordance with SSPC-SP 13/NACE No. 6 Joint Surface Preparation Standard “Surface Preparation of Concrete” to remove laitance, curing compounds, hardeners, loosely adhering concrete, and/or other contaminants. The resultant surface should be a sound, uniform substrate, with a concrete surface profile in the range of CSP 2-3 as laid out in ICRI Guideline 310.2R-2013, “Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair”.
Note Dulux Protective Coatings does not recommend acid etching as a form of surface preparation. Remove all dust by thorough vacuum cleaning.

**Check moisture**
Check moisture content of the floor prior to painting and ensure that it is no greater than 5%*.
* To minimise the risk of moisture interference, Dulux recommends the following 2 tests be conducted prior to coating; ASTM F2659-10 “Standard Guide for Preliminary Evaluation of Concrete, Gypsum Cement and other Floor Slabs and Screeds using a Non-Destructive Electronic Moisture Meter” (Moisture Content to be <6%), and ASTM D4263 “Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method” (no visible moisture present). If there is concern about moisture in the substrate, refer to your Dulux Technical Consultant for further evaluation.
Note: The testing listed above cannot guarantee avoidance of future moisture related problems particularly with existing concrete slabs. This is especially true if the use of an under-slab moisture vapor barrier cannot be confirmed or concrete contamination from oils, chemical spills, unreacted silicates, chlorides or Alkali Silica Reaction (ASR) is suspected.

**Coat surface**
Check that the surface is clean, dust-free and defect-free prior to coating. Apply the floor coating system in strict accordance with the technical data sheets and specification without delay before the floor becomes recontaminated. Allow floor coating system to fully cure.
Seal structural control or expansion joints with a flexible polyurethane sealant such as Fosroc Nitoseal PU 400 in strict accordance with the technical data sheet. Do not paint over floor joint sealant.

## Coating System Summary

- 1st Coat — Dulux Avista Internal Flooring Waterbased Epoxy Low Sheen
- 2nd Coat — Dulux Avista Natural Stone Look Flakes
- 3rd Coat — Dulux Avista Polyaspartic Two Pack High Gloss

## Coating System

### 1st Coat — Dulux Avista Internal Flooring Waterbased Epoxy Low Sheen

| Coat Type | Datasheet |
|---|---|
| **1st Coat** | **AUAV00008 Dulux Avista Internal Flooring Waterbased Epoxy Low Sheen** |

**Read the full Datasheet details at Dulux Avista Internal Flooring Waterbased Epoxy Low Sheen**

| Components | Mixing Ratio |
|---|---|
| **2** | **1:1** |
| Pot Life | Yield |
| **2 hours** | **10L** |

Application Methods

**Airless Spray** **Brush** **Roller** **Hopper Gun**

| | Min | Max | Recommended |
|---|---|---|---|
| Theoretical Spread Rate (m²/L) | 10 | 6 | 8 |
| Wet Film Per Coat (microns) | 100 | 167 | 125 |
| Dry Film Per Coat (microns) | 35 | 58 | 44 |
| Recoat Time ** | 4 hours | 72 hours | |

V.O.C. Level
**<25 grams per litre**

Meets GBCA V.O.C. Requirements?
**Yes**

Total Volatile Organic Content (TVOC) values are calculated in accordance to the stated methodology within Green Star Technical Manuals. The TVOC content is theoretically calculated as the sum total of the known VOC values of the product's raw material components. These materials include the base paint plus additional low VOC tinter required for non-factory packaged colours.

Coating Application Details

**Tinting**
Dulux Avista Waterbased Epoxy can be tinted before use.
Dulux Avista Waterbased Epoxy is not a clear.

**Option 1: In-Store Tint**
Tinted in store at time of purchase. Can be tinted to one of the 6 Dulux Avista colours or any Vivid White based Dulux colour. Part A only to be tinted to a 5L formula.
**Note:** In-store tinting may not be available at all Dulux Avista stockists.

**Option 2: Dulux Avista Waterbsed Colour Tint** - Available in 7 colours.
Add 1-2 x 400ml Dulux Avista Waterbased Colour Tint per 10 Lt kit (40ml-80ml per litre of mixed epoxy).
**Note:** 2 x 400ml Avista Waterbased Colour Tint per 10 Lt kit recommended for BLACK tint.
Do not exceed 2 x 400ml of tints per 10L kit.

**Mixing**
Mix Parts A and B in correct proportions (1:1 by volume) in a clean, dry 20L bucket. Mix thoroughly for a minimum of 1 minute with a mechanical mixer at low speed until mix colour is uniform.

**Roller Application**
Apply to surface using a good quality 10mm-22mm roller & tray. Ensure products is applied evenly and not too thick.

For best results, apply first coat to a damp concrete surface. Alternatively, first coat can be diluted up to 10% with water (when applied directly to concrete only).
Allow minimum of 3 hours between coats. Additional coats can be applied as soon as surface is tack free & able to be walked on.
**Note:** Recoat times will vary drastically depending on ambient conditions.
All additional coats to be applied undiluted. Minimum of 2 coats required. Lighter colours may require additional coats for full colour coverage.
For increased slip resistance, Dulux Avista Slip Reducing Crushed Glass or Dulux Avista Slip Reducing Additive Powder can be used with this product. Refer to the relevant product TDS for application instructions.

**Hopper Gun Application**
Pour properly mixed epoxy into Hopper Gun. Spray epoxy onto surface at approx. 25-35psi. Apply 1-2 coats to ensure even coverage.
For non slip option, fine silica sand can be combined with epoxy at a ratio of 500gm to 1kg per litre of mixed epoxy & sprayed onto surface. Clean, washed, fine silica sand must be used.

**Clear Topcoats (optional)**
For additional protection, Dulux Avista Waterbased Epoxy can be overcoated with the following products:
- Dulux Avista 2 Pack Urethane
- Dulux Avista Polyaspartic Sealer
- Dulux Avista Polyurethane Sealer

**Note:** If being used externally, Dulux Avista Waterbased Epoxy **MUST** be overcoated to prevent damage from high UV exposure.

| SDS Number | SDS Link |
|---|---|
| **DLX004647** | **View SDS Link** |
| SDS Number | SDS Link |
| **DLX004653** | **View SDS Link** |

## 2nd Coat — Dulux Avista Natural Stone Look Flakes

| Coat Type | Datasheet |
|---|---|
| **2nd Coat** | **AUAV00018 Dulux Avista Natural Stone Look Flakes** |

**Read the full Datasheet details at Dulux Avista Natural Stone Look Flakes**

Application Methods

**Hand broadcast**

Meets GBCA V.O.C. Requirements?
**Not Applicable**

Coating Application Details
Dulux Avista Natural Stone Look Flake to be applied into second coat of Dulux Avista Waterbased Epoxy, while wet. Refer to waterbased epoxy TDS for mixing & application instructions.
**Applying Natural Stone Look Flakes**
Remove flakes from box and place in a suitable clean, dry bucket.
Dulux Avista Waterbased Epoxy must have adequate film build for flake to adhere to (quality 22mm nap roller recommended). Do not allow to dry prior to applying flake. It is suggested to complete this step in manageable sections, by rolling approximately 5-10m² of waterbased epoxy and applying flake whilst area is still wet.
Immediately after applying Dulux Avista Waterbased Epoxy coating and while coating is still wet, walk out on the job wearing spiked shoes and evenly sprinkle the dry flake over the surface.
Evenly sprinkle the flakes from an open flat palm with fingers spread. Move hand back and forth allowing the flakes to fall evenly while the surface is still tacky. Ensure a full and even coverage.
Note: 2 person application (one cutting & rolling, one flaking) recommended for best results.

Allow Dulux Avista Waterbased Epoxy to cure (approximately 4-6 hours depending on conditions).
Broom and discard excess flake. Lightly sand surface with 80-100 grit sandpaper/sanding pole. Vacuum thoroughly.

Surface must be sealed with one of the following products: Refer to relevant TDS for application details.
- Dulux Avista Polyurethane Sealer
- Dulux Avista 2 Pack Urethane Sealer
- Dulux Avista Polyaspartic Sealer

Note: Additional sanding can be completed between coats of urethane or polyurethane for a smoother finish. If a higher slip resistance is required, sanding may not be necessary.

| SDS Number | SDS Link |
|---|---|
| **PAR000558** | **View SDS Link** |

## 3rd Coat — Dulux Avista Polyaspartic Two Pack High Gloss

| Coat Type | Datasheet |
|---|---|
| **3rd Coat** | **AUAV00024 Dulux Avista Polyaspartic Two Pack High Gloss** |

**Read the full Datasheet details at Dulux Avista Polyaspartic Two Pack High Gloss**

| Components | Mixing Ratio |
|---|---|
| **2** | **1:1 (by volume)** |

Pot Life
**40 minutes* (after mixing) @ 20 - 25°C**

Application Methods

**Brush** **Roller** **Floor Squeegee**

**Flooring squeegee**

| | Min | Max | Recommended |
|---|---|---|---|
| Theoretical Spread Rate (m²/L) | 12.5 | 5 | |
| Wet Film Per Coat (microns) | 80 | 200 | |
| Dry Film Per Coat (microns) | 80 | 200 | |
| Recoat Time ** | 90 minutes | 18 hours | |

V.O.C. Level
**20g / litre**

Meets GBCA V.O.C. Requirements?
**Yes**

Total Volatile Organic Content (TVOC) values are calculated in accordance to the stated methodology within Green Star Technical Manuals. The TVOC content is theoretically calculated as the sum total of the known VOC values of the product's raw material components. These materials include the base paint plus additional low VOC tinter required for non-factory packaged colours.

Coating Application Details

**Mixing**

Stir the Dulux Avista Polyaspartic Part B prior to using. Combine equal parts by volume of Dulux Avista Polyaspartic Part A and Part B and mix thoroughly in an independent container using a low speed heavy duty cordless drill and suitable spiral mixer for 1 to 1½ minutes. Mix only enough product (typically 5 - 10 litres. For Resurfacing Dilute to 10 - 20% of Dulux Avista solvent to help with penetration and aid with application. This can be applied within the working life, depending on the labour available).

**Important:** Once mixed the product should be poured out in ribbons onto the floor and spread out immediately using a squeegee. Holding the product in the original mixing can will lead to an exothermic reaction which will significantly reduce the working life of the material

**Application**

*1st Coat*

Following the required preparation, apply Dulux Avista Polyaspartic using 230mm or 270mm unifibre roller sleeves. Note: a squeegee may be used prior to rolling to help spread material. During the application, the roller sleeves will have to be changed as they will become tacky. After spreading out the material it is important to back roll the floor. Back rolling is done to ensure even application and will help with breaking any bubbles that may have formed from pinholes. On average a roller cover will last approximately 10 min before a replacement is required.

*2nd Coat (optional)*

After the first coat has become tack-free, a second coat can be applied if required. This will be after approximately 1 hour but no longer than 18 hours after application of the first coat.

At temperatures of 20 - 30°C foot traffic may be permitted after 1 to 2 hours, and light vehicular traffic after 24 hours; however, in cold weather a longer period before use may be required.

If recoating after 18 hours, the surface will require a light abrade using a 100 grit sandpaper and a solvent wipe to ensure the surface is clean for better adhesion.

**Overcoating Epoxy and Flake Flooring**

| |
|---|
| Dulux Avista Polyaspartic can be applied over Dulux Avista epoxy and flake flooring systems. Overcoating with Dulux Avista Polyaspartic should occur within 48 hours of the application of the base epoxy coating. Refer to Dulux Avista Decorative Flakes or Natural Stone Look Flakes Technical Data Sheet (TDS) for detailed flake application process. |

| SDS Number | SDS Link |
|---|---|
| | View SDS Link |

| Coating System Notes |
|---|
| System suitable to use in any area of a Class 2 to Class 9C building as specified in the NCC Volume One - Building Code of Australia |

**Disclaimer**



Unless Dulux has provided you with a customised, project-specific specification, this Duspec+ document does not represent that any particular product or product system will be suitable for your project.

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The correct colour or colour match is the responsibility of the applicator. Colours will change over time and Dulux does not guarantee that the same colour newly mixed will match a colour applied earlier which has been subjected to weathering or other change elements. No product colour is guaranteed against colour change.

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**WHERE LEAD MAY BE PRESENT:** The asset manager is responsible for verifying the presence of lead and determining whether to remove or encapsulate the lead. If lead is present, the work must be done in strict accordance with AS 4361 Parts 1 and 2 and Worksafe Australia guidelines.