# AUAC03874 Dulux Acratex RenderWall Acrabuild Plus with mesh joints/Coventry Coarse/ Acrashield Advance on 75mm Helix Panel on New Autoclaved aerated concrete (AAC) block or panel [Exterior]

## Scope of Works

A High Build levelling and Finishing System for Helix Panel (75mm Autoclaved Aerated Concrete (AAC)).

THIS SYSTEM IS SUITABLE WHERE PANEL ALIGNMENT TOLLERANCES = 4MM
WHERE MAJOR MISALIGNMENT OCCURS, REFER TO ADDITIONAL REMEDIAL RECOMMENDATIONS FOR PRE-TREATMENT

**Incorporating:**

Dulux **Acratex RenderWall AcraBuild Plus** is a pre blended dry mix polymer modified cementitious wall render designed specifically to produce a high quality, even and true surface over brick, block, and Aerated Autoclave Concrete (AAC) block and AAC Panel installed and prepared in accordance with manufactures technical requirements.

Dulux **AcraTex Coventry Coarse** is a decorative, low build protective coating displaying excellent resistance to weathering and atmospheric chemicals. The finish will resemble that of a coarse granular render which has been sponge floated.

Further enhanced by **AcraTex AcraShield Advance**, which is a mid-build water borne, highly flexible 100% acrylic elastomeric membrane weatherproofing coating with excellent water impermeability, carbonation resistance, chloride ion resistance, and resistance to mould and mildew. That can be applied by roller - conventional nap or low-profile texture sleeves or airless spray to provide maximum crack bridging and anti-carbonation performance.

## Substrate and Substrate Preparation

### Substrate Notes

**General**

AAC is manufactured from sand, lime and cement, to which is added water and aluminium paste. After mixing, the cement slurry is poured into moulds. The aluminium paste reacts with the alkaline elements in the mixture and forms hydrogen gas. This liberated gas expands the mixture forming extremely small finely dispersed air spaces. The product is removed from the mould after a few hours, cut to the required dimension and
finally cured under pressure in a steam autoclave.

Coating-Finishing systems for AAC must meet specific substrate supplier technical requirements. Typically AAC requires an AAC specific render levelling coat plus a performance Acrylic Texture system. Standard cement renders (including site mixed and general bag mixed) are strictly NOT recommended by substrate suppliers and may lead to cracking and delamination.

Helix Panel is (typically) a 50 or 75mm panel of Autoclaved Aerated Concrete (AAC) with corrosion protected steel reinforcement embedded during production.
This lightweight, yet solid masonry panel is designed for external cladding in timber or steel frame construction. Panels are glued together (thin bed) using AAC Manufacturer's adhesive to a design standard of providing a level, fully filled joint.

### Substrate Preparation Notes

**Assess suitability**

Check that the AAC blocks or panels are installed strictly in accordance with the AAC manufacturer's installation instructions. Ensure all AAC joints are completely and fully glued along their entire contact area. Failure to ensure full glue contact and cure will cause joint cracking and void all warranty of the coating system. It is the responsibility of the AAC installer to ensure all joints or major imperfections and misalignments are filled and sanded true and flush before applying any coating system. They must be flush and plumb ensuring the best possible surface prior to application of the base coat. Uneven face alignment will require additional materials to achieve a flush and level facade.

Check that expansion joints are strictly in accordance with AAC manufacturer's design guides, including the incorporation of discontinuous top-hat sections across joints and at corners. Expansion joints are recommended at (max) 3m height and 6m wide intervals and at all building weak points such as around openings (e.g. windows, doors and garage doors), horizontally between all floor levels, and at all interfaces of different building construction materials.

**Clean surface**

Remove any dust, laitance or efflorescence by brush or broom. Wash down the surface with clean potable water to ensure that the AAC surface is sound, clean and free of all dust, dirt, salts or any other surface contaminants.

**Repair surface imperfections**
Sand off or rasp surface misalignments, protrusions, mortar splashes, adhesive and other contaminants to leave a level surface. Fill voids and other imperfections with a suitable patching compound.
**Install 200mm Exsulite Mesh centrally over all joints (except control joints) with stainless steel staples – take care not to bulge mesh.**

Dampen surface with water or suitable primer to prevent the substrate's porosity from hindering the curing of the base render.
Apply the specified RenderWall base render over the entire area in strict accordance with the technical data sheet, taking great care to ensure control joints remain free of levelling material during application. Ensure the finish is level and suitable for the specified texture coating system. Allow to fully cure.

**Treat joints**
Clean out and fill all control joints with a suitable paintable polyurethane joint sealant. Care must be taken to ensure joint remains free of levelling or texture material during application, or joint is cleaned out prior to sealant application. Typical control joint width is 10mm.
Install sealant in strict accordance with manufacturer recommendations and as neatly as possible – take great care not to smear the sealant on the façade side or edge of the expansion joint recess – use masking tape to protect edges. Failure to confine sealant to expansion joint recess only will lead to cracking of the texture coating over the smears. After sealant is cured apply a 6 to 8mm masking tape over the sealant.

**Apply texture**
Apply the specified texture coating to the entire area, removing all masking tape as soon as possible and well before the texture coating has skinned. Do not allow the texture coating to set over the control joint sealant.

**Apply topcoat**
When top coating the texture coating with an elastomeric topcoat such as AcraShield, apply the topcoat to the entire joint, including sealant.

Additional Notes
Install 200mm Exsulite Mesh centrally over all joints prior to applying base coat.

## Coating System Summary

- Prep Coat — Dulux Acratex RenderWall Acrabuild Plus
- Intermediate — Dulux Acratex Coventry Coarse
- Top Coat — Dulux Acratex AcraShield Advance
- Top Coat — Dulux Acratex AcraShield Advance

## Coating System

### Prep Coat — Dulux Acratex RenderWall Acrabuild Plus

| Coat Type | Datasheet |
|---|---|
| **Prep Coat** | **AUAC00134 Dulux Acratex RenderWall Acrabuild Plus** |

**Read the full Datasheet details at Dulux Acratex RenderWall Acrabuild Plus**

Application Methods

**Trowel**

**Check the degree of trueness (level) of the surface prior to commencement of application. Badly misaligned surfaces may require work screeds (pre-applied strips of render to set levels to work to) or non corrosive starter beads installed  Application by Hawk & Trowel should occur in 2 passes "wet on wet" • An initial pass of no more than 5mm thickness to fill mortar joints / hollows and generally align • Followed by a leveling pass. Always terminate the RenderWall Acrabuild Plus application above the damp course line. Never bridge damp course**

| | Min | Max | Recommended |
|---|---|---|---|
| Theoretical Spread Rate (m²/L) | 0.3 | 0.2 | 0.2 |
| Wet Film Per Coat (microns) | 4000 | 6000 | 6000 |
| Dry Film Per Coat (microns) | 4000 | 6000 | 6000 |
| Recoat Time ** | 7-10days | Indefinite | |

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

Product usage Scaling factor = 1.7 kg (dry powder) per sqm per 1mm thick
(eg. a 6mm thick application requires (6 x 1.7) = 10.2 kg per sqm of Dulux Acratex RenderWall AcraBuild Plus powder)

**Mixing**

Mix Ratio (approx. 15L mixed Dulux AcraTex RenderWall AcraBuild Plus)
¦ 20kg (1 full bag) of Dulux Acratex RenderWall AcraBuild Plus
¦ Approx 3.5 litres of fresh clean water Refer to below for handling instructions
¦ Measure the water component into a 15L pail and add the powder while mixing with a suitable power Mixing Drill
¦ Allow to stand for 3-5 minutes
¦ Remix and adjust consistency with up to 0.5L additional water (once) relative to application requirement

| SDS Number | SDS Link |
|---|---|
| **DLX002683** | **View SDS Link** |

### Intermediate — Dulux Acratex Coventry Coarse

| Coat Type | Datasheet |
|---|---|
| **Intermediate** | **AUAC00081 Dulux Acratex Coventry Coarse** |

**Read the full Datasheet details at Dulux Acratex Coventry Coarse**

Application Methods

**Trowel** **Hopper Gun**

**Tex Spray. Coventry Coarse should be tinted in accordance with AcraTex Tint Guide to the specified membrane top coat colour (Or a colour as close as possible to the specified colour in accordance with product /base tint rules)**

| | Min | Max | Recommended |
|---|---|---|---|
| Theoretical Spread Rate (m²/L) | 0.8 | 0.7 | 0.8 |
| Wet Film Per Coat (microns) | 1333 | 1467 | 1333 |
| Dry Film Per Coat (microns) | 1000 | 1100 | 1000 |
| Recoat Time ** | 24 hours | Indefinite | |

| V.O.C. Level | Meets GBCA V.O.C. Requirements? |
|---|---|
| **< 35 g/L untinted** | **Not Applicable** |

Coating Application Details

Trowel and Hawk finished with a plastic float
Product should be tinted & thoroughly mixed before use.
Refer to the Dulux AcraTex Application Manual for detailed application instructions.
Use masking to protect adjacent areas. The area should be patched and primed ready for final texture coat.
Dulux Acratex Coventry Coarse is applied by hawk and stainless steel trowel, then finished in a circular motion with the plastic finishing float to achieve an even granular appearance.

Two people are required for most areas - one person to apply the Coventry Coarse to the wall, the second to process / float finish.
Delivery must be to a uniform thickness.
Allow the material to stand for a short time before "rubbing up" with float to produce the desired pattern/texture.
Application must be in a brisk uniform fashion terminating when the whole area is complete, banded by a natural break such as an expansion joint, corner etc.
Application commenced on a single area must be completed uninterrupted.

| SDS Number | SDS Link |
|---|---|
| **194-85753 Coventry Coarse QTB DLX003092** | **View SDS Link** |
| SDS Number<br>**194-85757 Coventry Coarse Extra Bright DLX003105** | SDS Link |
| SDS Number<br>**194-85944 Coventry Coarse Accent Base DLX003096** | SDS Link |
| SDS Number<br>**194-85753 Coventry Coarse Accent Base WG DLX002659** | SDS Link |

## Top Coat — Dulux Acratex AcraShield Advance

| Coat Type | Datasheet |
|---|---|
| **Top Coat** | **AUAC00020 Dulux Acratex AcraShield Advance** |

**Read the full Datasheet details at Dulux Acratex AcraShield Advance**

Application Methods

**Air Spray** **Airless Spray** **Brush** **Roller**

| | Min | Max | Recommended |
|---|---|---|---|
| Theoretical Spread Rate (m²/L) | 6 | 4.5 | 6 |
| Wet Film Per Coat (microns) | 167 | 222 | 167 |
| Dry Film Per Coat (microns) | 75 | 100 | 75 |
| Recoat Time ** | 2 Hours | indefinite | |

| V.O.C. Level | Meets GBCA V.O.C. Requirements? |
|---|---|
| **Refer to specific data sheets AUCA00085 AcraShield Advance Low Gloss AUAC00049 AcraShield Advance Matt AUAC00153** | **Not Applicable** |

| | |
|---|---|
| **AcraShield MIOX AUAC00119 AcraShield Aluminium** | |

Coating Application Details
**Brush, roller and airless spray**
Brush and roll at the same time to avoid picture framing.
Product should be thoroughly mixed before use. Refer to the Dulux Acratex Application Manual for detailed instructions.

Dulux Acratex Acrashield may be applied by brush, roller or airless spray.
A 10-20mm nap roller is used depending on the type of texture being overcoated.
Typical Airless Spray set up is: Graco Ultra 500 using 0.019-0.021 spray tip at approx. 1000 psi.

| | |
|---|---|
| SDS Number<br>**DLX003010 AcraShield Advance Matt** | SDS Link<br>**View SDS Link** |
| SDS Number<br>**DLX003011 AcraShield Advance Low Gloss** | SDS Link<br>**View SDS Link** |
| SDS Number<br>**DLX003153 AcraShield MIOX** | SDS Link<br>**View SDS Link** |
| SDS Number<br>**DLX003150 AcraShield Aluminium** | SDS Link<br>**View SDS Link** |

## Top Coat — Dulux Acratex AcraShield Advance

| | |
|---|---|
| Coat Type<br>**Top Coat** | Datasheet<br>**AUAC00020 Dulux Acratex AcraShield Advance** |

**Read the full Datasheet details at Dulux Acratex AcraShield Advance**

Application Methods

**Air Spray** **Airless Spray** **Brush** **Roller**

| | Min | Max | Recommended |
|---|---|---|---|
| Theoretical Spread Rate (m²/L) | 6 | 4.5 | 6 |
| Wet Film Per Coat (microns) | 167 | 222 | 167 |
| Dry Film Per Coat (microns) | 75 | 100 | 75 |
| Recoat Time ** | 2 Hours | indefinite | |

| | |
|---|---|
| V.O.C. Level<br>**Refer to specific data sheets AUCA00085 AcraShield Advance Low Gloss AUAC00049 AcraShield Advance Matt AUAC00153 AcraShield MIOX AUAC00119 AcraShield Aluminium** | Meets GBCA V.O.C. Requirements?<br>**Not Applicable** |

Coating Application Details
**Brush, roller and airless spray**
Brush and roll at the same time to avoid picture framing.
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| SDS Number | SDS Link |
|---|---|
| **DLX003153 AcraShield MIOX** | **View SDS Link** |
| SDS Number | SDS Link |
| **DLX003150 AcraShield Aluminium** | **View SDS Link** |

## Comments

Comments

- Practical spreading rates will vary from quoted theoretical figures depending on substrate porosity, surface roughness, overspray losses, application methods and environmental conditions (e.g. wind). All preparation and painting must conform to AS2311: The Painting of Buildings
  Do not apply paint if Relative Humidity is above 85% or temperature is within 3°C of Dew Point. Do not apply if the surface temperature is greater than 40°C or below 10°C, or likely to fall below 10°C during the application or drying period. Dry times apply to a single coat at recommended spread rate and at 25°C and 50% relative humidity Allow longer times under cool, moist, or still conditions and or when applied at high film builds. Protect from dew, rain and frost for 48 hours when apply at the recommended spread rate. Avoid application in hot, windy conditions or on hot surfaces cool the surface by hosing with water and paint the cool damp surface.

  When using Bright Reds, Oranges, Blues and Yellows or where very light (or dark) colours are applied over highly contrasting colours an extra coat maybe required. Dulux recommend full coating systems including a top coat. For **all** systems the texture and/or base coat should be tinted in accordance with AcraTex tint guide to the specified membrane top coat colour (or a colour as close as possible to the specified colour as product and tint rules allow). Application techniques should be adjusted to achieve the recommended DFT and finishing standard.

  To avoid "Picture Framing" of texture topcoats "wet on wet" cutting in and coating technique is recommended or apply multiple coats thinning the first coat. At commencement of coating system application to the substrate it shall be deemed that the applicator has certified that the surface which it is to be applied to is fit to receive the specified coating(s) system. When the applicator is preparing the site sample for approval they should advise the project superintendent if the substrate condition is not of sufficient standard to produce the specified finish.

  Where possible avoid dark colours - these will give raise to much higher surface temperature that may cause addition thermal stress and cooling demand to the building envelope and/ or require extra engineering considerations (greater building costs). Consult dulux on the potential to use InfraCOOL heat reflective coatings that will keep the surface cooler “like for like” colour. Glancing light joints and panel deformation may be clearly evident under glancing light, casting visible shadows of the minute and uneven projections of the joints. Glancing light is light that is nearly parallel to the surface of the wall and casts visible shadows and uneven projections of the joints. Just like rendered masonry/ jointed system any uneven projections will be highlighted and as such are outside the control / scope of this specification. Refer **http://www.dulux.com.au/pdf/tech-advice/DLX_TECH_Glancing-Light.pdf**

  The coastal area is considered a marine environment and as such salt potentially can shorten the life of the coating systems. Care needs to be taken to wash down all areas twice. Once to remove surface contaminants, and raise salts to the surface and then secondly to remove these salts. Due to the locality, weather conditions and lag time between applications of the coating system it may require the need to wash again, between coats.

  This specification is to be read in conjunction with dulux product data sheets, a dulux warranty can be provided on request when the **full** acratex system including a membrane topcoat/s is applied by a dulux acratex trained applicator, according to specification and at the specified spreading rates and to the surface preparation details described in the dulux acratex specification manual. The dynamics of the substrate is outside the control of dulux australia and as such joint deformation or cracking is excluded from warranty terms. Colour change is a natural part of a coating weathering and is excluded from warranty terms Refer warranty document for full terms and conditions.

  Fungi and algae can exist on virtually any surface (even glass) provided the right conditions for growth are met. Visible growth on painted surfaces is typically caused by contaminants present together with the presence of high enough levels of moisture to support growth. Agents in paints become ineffective where they cannot “touch” the growth source (eg where growth emanates from deposits on the film). Additionally the active agents are “consumed” in the process such that protection is time limited where conditions support ongoing growth performance is greatly improved with the inclusion of a membrane Top coat like acraShield, elastomeric 201 or acraSkin. Refer:
  **http://www.dulux.com.au/specifier/our-brands/dulux-acratex/more-than-just-render** The exterior texture coatings should be cleaned on a regular basis. This will help maintain your overall aesthetic appearance and preserve your acraTex texture coating system. Cleaning once every year will remove light soil as well as grime and airborne pollutants refer dulux acraTex care & maintenance guide
  **http://www.dulux.com.au/specifier/our-brands/dulux-acratex/acratex-care-and-maintenance.**

  When using this specification, the applicator shall maintain records in accordance with AS 3894 Parts 10, 11 and 12 and others as required by the project manager. These records shall be made available for inspection at any time by the project manager or authorised representative and submitted to the principal contractor upon completion of work.

  **Surfactant leaching from exterior water-based coatings**
  Occasionally amber, clear or white spots/streaks are seen on a newly painted surface within the first few weeks after application. They usually appear after light rain or overnight dew and generally located in sheltered areas or areas with limited sun exposure. Under normal conditions surfactant contained in the tinted paint colour is slowly leached to the surface and washed away by rain leaving no trace and is a normal part of drying of any exterior water-based paint. Under certain atmospheric conditions and these surfactants leach or migrate to the paint surface, is concentrated forms and leaves clear or white deposits upon drying. These conditions include cool or humid weather or painting cold substrate and in most cases these marks on the wall surfaces are more noticeable on dark colours, such as browns or dark greens, etc.. The clear/white surfactants that have migrated to the wall surface areas will cause no down grading nor performance changes or long term durability concerns of the paint films integrity and unfortunately have become an appearance issue instead. They easily removed from the paint film within a week

or so of their appearance by washing with warm water & commercial grade detergent or via Nifti or Spray'n'Wipe followed by rinsing with fresh clean water. Under severe conditions they may reappear once or twice until all the surfactant has been removed. It will be less noticeable each time, and can be removed in the same manner as before. Refer **http://www.dulux.com.au/pdf/tech-advice/DLX_TECH_Leaching.pdf**

**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.

Any information provided in this Duspec+ is given in good faith and is believed by Dulux to be correct at the time of publication. Products and coating systems can be expected to perform as indicated in this Duspec+ document, provided the substrate is in good condition, the coatings are applied by a suitably experienced and skilled applicator, and the preparation, application and maintenance is followed strictly as set out in this Duspec+ document, and as recommended on the applicable Dulux Product Data Sheet and Safety Data Sheets for the relevant products (available from www.duspecplus.com.au). Climatic conditions at application time can affect Duspec+ documentation suitability and product performance.

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.

Where any liability of Dulux in respect of this Specification cannot by law be excluded, Dulux's liability is limited, as permitted by law and at Dulux's option, to resupply of the relevant products or services or to reimbursing the cost of those products or services.

**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.