



## SRO1276 Rendering Specification ARDEX WR 120 FC Acrylic Render System – Swimming Pools

### Scope

**ARDEX WR 120 FR:** Is a fine-grade, fibre-reinforced, acrylic render suitable for rendering the internal surfaces of a concrete swimming pool. It has an application thickness of 2-12 mm. When spray applied with appropriate apparatus, a build-up of 30 mm can be achieved in one coat.

*Note: The full system for the treatment of swimming pool internals is covered in the ARDEX Technical Bulletin TB088.*

### Substrates

The only suitable substrate for this application is:

- Concrete that has been cured for 6 weeks to allow for any plastic shrinkage to occur.

*Note: Advice on potential plastic shrinkage of concrete pool shells should be obtained from an engineer.*

### Substrate Preparation

The substrate must be clean, sound and free from all grease, oil, dust and other surface contaminants such as curing compounds. Substrate surfaces should be open pored (permeable).

All concrete protrusions shall be ground to be smooth and level with the primary adjacent surface. Surface irregularities resulting from formwork impressions shall be remedied following surface preparation of the off-form concrete.

### 1. CAST CONCRETE

This section is likely to refer to the base of the pool.

#### Light Broom Finish

All surfaces should be high pressure water washed or high pressure detergent washed. Apparatus with a nozzle pressure of not less than 7-10 MPa (1,000-1,500p.s.i.) is generally required in order to remove all dirt, grease, oil and other surface contaminants.

#### Other Surface Finishes

All surfaces shall be treated by wet or dry abrasive blast cleaning. Care should be taken not to excessively expose the concrete aggregate hence a non-metallic aggregate must be used.

If abrasive blast cleaning is not possible surfaces should be cleaned free of any residual form release agent (according to the manufacturer's instructions) or other surface contaminants.



## 2. OFF-FORM CONCRETE

This section refers to the walls of the pool.

Any residual form release agent should be removed. The surfaces should be wet or dry abrasive blast cleaned to achieve a surface profile of 50-75µm to open the pores of the concrete. Care should be taken not to excessively expose the concrete aggregate hence a non-metallic aggregate must be used.

The prepared surfaces may then be rendered in preparation for direct coating membrane application.

### Secondary Preparation

When rendering, it is advisable to use the minimum thickness that is consistent with achieving a smooth and flat surface. It is not desirable to have alternating areas of low thickness then deep layers, as the shrinkage after cure will be variable across the surface of the rendered shell. However, the larger the size tile used, the flatter the surface needs to be, so there has to be compromise between tile size used and the ability to provide a smooth and stable surface for tiling.

**NOTE:** This render is **NOT** to be placed on top of the ARDEX moisture barriers or an ARDX flexible membrane system. It must be installed under it. Placement of a render onto the flexible surface of a Class I, II or III membrane creates the risk of cracking and de-bonding.

### Rendering with ARDEX WR 120 FR

[ARDEX WR 120 FR](#) render is a pre-bagged product that must be primed, waterproofed then tiled in swimming pool applications. It is not suitable to be left as the finished surface. It should be applied directly to the prepared and primed concrete surface at a minimum thickness of 2mm and nominal maximum thickness of 12mm.

### Priming

The surface should then be primed with one coat of [ARDEX WR PRIME](#) (diluted 1:5 with water). It should be allowed to dry to a clear film (approximately 3 hours)

### Additive Addition

It is advisable to include [ARDEX WR PRIME](#) in the render at a dilution rate of 1:5 ([ARDEX WR PRIME](#) / Water) for first coat.

### Mixing

**Note:** Safety precautions must be taken. i.e., eye protection, chemically resistant gloves and a dust mask must be worn.

Each 20kg bag of [ARDEX WR 120 FR](#) requires the addition of 3.0 – 3.5 Litres of the [ARDEX WR PRIME](#)/ Water Mix.



Measure the [ARDEX WR PRIME](#) / Water mix into a clean suitably sized pail (20 Litre) and then add approximately half to two-thirds of the powder to the water. This should be done while mixing with a heavy duty electric drill and mixing paddle on slow-medium speed (approx. 400-600 rpm).

Mix to fully wet-out the initial powder addition. The remaining one third of the powder can then be mixed to fully disperse. Continue mixing for approximately 2 to 3 minutes to fully homogenise. Let the mixed render sit for 1 – 2 minutes, then briefly mix again (20 seconds) prior to placement.

### **Application**

**Note:** *Safety precautions must be taken. i.e., chemically resistant gloves must be worn.*

Apply the render with a wooden trowel, evenly spreading the mix over the surface. A straight edge can be used to check for level or flatness of the render.

After 10-30 minutes, depending on ambient and surface conditions, work can begin on the surface finish. The surface finish should be prepared to be smooth but 'open-pored' by using a wooden trowel or a sponge.

The mixed material is useable for up to 30-40 minutes @ 23°C and 50% relative humidity. A subsequent coat of [ARDEX WR 120 FR](#) may be applied (if required) after 4-8 hours depending on ambient conditions and application thickness.

It is advised to allow the render to cure for a minimum of 1 day for each 2mm thickness of the render before the Moisture Barrier / Primer ([ARDEX WPM 300](#)) is applied. The ARDEX WPM 300 is applied in two applications.

The first coat of [ARDEX WPM 300](#) is diluted 50/50 with water then applied by brush or roller. The second coat is applied undiluted by brush, roller or spray at a coverage rate of 3m<sup>2</sup>/ Litre.

### *Disclaimer:*

*The recommendation selected is based upon questions answered on the ARDEX Australia website. This recommendation is designed as a general application for your described situation and should not be considered site specific documentation for general distribution. Always consult the latest relevant ARDEX Technical Bulletins and information on the product packaging and/or product data sheets (available on the ARDEX Website). Australian and other relevant standards should be followed during installation. If you have any further questions or would like further clarification please contact the ARDEX Technical Services Hotline on 1800 224 070 (9am to 5pm Monday to Friday).*