

## Corrobond AR

### Acrylic polymer bonding agent

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### Product Features

**Corrobond AR** is a styrene free, milky white emulsion, based on a pure acrylic polymer that is designed to improve the physical properties and integrity of cementitious mortars, screeds or renders, and act as a bonding agent / sealer to concrete, plaster or other porous substrates.

**Corrobond AR** improves durability, compressive, tensile and flexural properties of modified mixes whilst reducing permeability, making it suitable for horizontal or vertical applications both internally and externally, including areas subject to wet / dry cycling or permanent immersion.

Complies to ASTM C 1059 Type 2.

### Typical Uses

**Corrobond AR** is highly versatile and can be used for a variety of applications including filling of hairline cracks, as a bonding slurry and integral admixture for sand / cement mortars, screeds and renders, bedding of kerbs, tiles and other general concrete reconstruction work.

**Corrobond AR** is particularly suitable for use with thin section repair mortars and screeds from 10 to 40 mm thickness, as an economical alternative to pre-bagged materials.

### Technical Data

Properties	Test Standards	Typical Values
Appearance		: milky emulsion
Specific Gravity	ASTM D 1475	: 1.01 ± 0.02
Bond strength	ASTM C 1042	: > 8.6 N/mm <sup>2</sup>

Note: All values given are subject to 5 - 10% tolerance.

### Directions for Use

#### Preparation

##### Concrete & masonry

Long term durability and function can only be achieved with good preparation to give a strong adhesive & mechanical bond to the substrate.

Damp concrete is permitted however all standing water & puddles must be removed prior to the application of **Corrobond AR**.

##### For small repairs:

Mark the extremity of the repair area and saw cut to a minimum depth of 10 mm to define the area to be removed.

Chip out the area within the saw cut back to sound concrete, to a minimum depth of 10 mm ensuring no feather edges and a good mechanical key for the subsequent repair.

If steel reinforcement is exposed, continue to break out the concrete to at least 15 mm behind the bars.

Mechanically prepare concrete surfaces preferably by grit blasting or grinding to remove laitance, curing compounds and other loose materials to provide a mechanical key for the subsequent product.

If formwork is required, ensure it is well constructed and has a suitable release agent such as **Corrorelease WB** to facilitate easy demoulding.

##### For all applications:

Thoroughly soak concrete and masonry substrates with clean water for at least 1 - 2 hours, removing standing and excess water prior to priming with **Corrobond AR**.

### Priming

#### Concrete & masonry

Apply a bonding coat comprising 3 parts OPC, 1 part water and 1 part **Corrobond AR** to the pre-soaked concrete surface. Apply the subsequent modified screed or mortar 'wet on wet' to the bonding coat. DO NOT LET THE BONDING COAT DRY.

Work the primer well into the concrete surface using a stiff brush to give an even, continuous, unbroken coating.

Simply re-prime if the primer coat has dried.

### Mixing

Dry blend the sand, cement and aggregates together in the mixer in accordance with the mix design guidelines below:

#### Guide to Corrobond AR mixes

Application	OPC (KGS)	Sand (KGS)	4 - 6 mm aggregate (KGS)	Corrobond AR (litres)	mixes portable water (litres)	Approximate yield (litres)
Bonding slurry	50	0.0	0.0	10.0	14.0	40.0
Patch repair mortar, 5 - 40 mm	50	125.0	0.0	10.0	6.0	79.0
Render, 5 - 12 mm	50	150.0	0.0	10.0	5.0	87.0
Heavy duty floor screed, 10 - 25 mm	50	75.0	75.0	10.0	6.0	88.0
Surface sealer / crack filling	0.0	0.0	0.0	1.0	3.0	4.0

Yield guide is approximate only, and may vary dependant on cement, moisture content and grading of sand and aggregates used. Trial mixes should be done on site to ascertain the required consistency, workability, mechanical properties and yield.

Accurately measure the **Corrobond AR** & drinking quality water, then add & mix continuously for 4 - 5 minutes until the required consistency is achieved.

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### Application

Apply the mixed material onto the prepared surface using a steel trowel, plastic or wooden float. Spread out and tamp or compact onto the primed surface to a minimum thickness of 5 mm.

Finish with a plastic float, wood float or steel trowel depending on the surface texture required.

Subsequent layers can be applied to the first layer after approximately 12 hours. The first layer should be scratch keyed to assist with bonding. No further pre-soaking or priming is required between layers.

This product can be applied using pumping equipment however we recommend using trained specialist applicators in the use of equipment and the product mix design to carry out the application.

It is recommended to do on site trials to assess the actual coverage rates that can be achieved prior to commencement of the works.

Expansion joints must be reflected through the repair or screed and preferably sealed with a sealant from the **Corroseal** range.

We recommend construction joints be introduced at thresholds or perimeters, and joints induced to give a maximum bay size of 40 m<sup>2</sup> in accordance with BS 8204 – Screed bases & in-situ flooring.

### Curing

Curing is essential for all cementitious products to prevent possible shrinkage cracks and ensure the performance characteristics of the product are achieved.

The duration for curing will depend on the applied thickness and ambient conditions. Typically for thickness of 10 – 25 mm, allow at least 4 – 7 days curing using one of the products from **Corrocure** range, applied immediately after initial hardening of the product or removal of any formwork.

Thicker sections may need up to 28 days curing depending on the ambient conditions, however subsequent floor finishes should only be applied when the residual relative humidity (RH) has reached 75% or less.

Please consult with Corrotech regarding the compatibility of **Corrocure** range of products with the subsequent finishes to be used, as this may help reduce preparation.

### Hot weather conditions

For application above 40°C we recommend adopting the following guidelines:

Store unmixed materials in a cool preferably air conditioned environment.

Avoid exposure of mixed & unmixed materials to direct sunlight.

Use iced water for mixing.

Keep equipment that will be in contact with the product cool and away from direct sunlight.

Avoid application during the hottest time of day.

### Cleaning

Clean tools & equipment immediately after use with detergent and water.

### Limitations

Substrate temperatures should be above 5°C and rising.

For application in temperatures above 40°C please refer to hot weather condition recommendations.

Avoid application if the work area may be subject to the onset of rain or moving water.

Additional coating protection should be applied if the product is exposed to chemicals.

All products should be used within the pot life. Materials not used within the specified time should be discarded.

The product should not be thinned with any type of solvent under any circumstances.

If the above general application details do not meet with your requirements, please contact Corrotech for a project specific method statement.

### Estimating

**Corrobond AR** pack size: 20 & 200 litres. Coverage rate:

As neat bonding agent 5 - 7 m<sup>2</sup> per litre per coat.

As an additive to tile adhesives, bedding mortars, sand renders, plasters and screeds, the dosage may vary from 10 - 20% by weight of cement.

All coverage rates given are theoretical and subject to actual site conditions. We recommend trial areas are done to establish practical consumption particularly for primers.

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#### Health & Safety

Always use appropriate PPE including gloves, goggles and a barrier cream to avoid contact with skin and eyes.

Should contact with skin or eyes occur, wash immediately with plenty of clean water and seek medical advice.

If swallowed, seek medical attention immediately. Do not induce vomiting.

Avoid inhalation and ensure adequate ventilation or suitable respiratory equipment if working in confined spaces.

Do not expose products to fire or naked flames under any circumstances.

Always refer to the product Material Safety Data Sheet (MSDS) for full health & safety and handling recommendations.

#### Storage

**Corrobond AR** has a maximum shelf life of 12 months from the date of manufacture.

To maximize shelf life always store products in their original, unopened packaging in a dry environment, away from direct sunlight with a minimum temperature of 10°C but not exceeding 35°C.

Damaged packaging, high humidity or extreme temperatures may reduce the shelf life.