



ARDEX BR 345

**MICROTEC® Fibre-Reinforced, High Resistivity,
Polymer-Modified, Structural Concrete
Patching and Repair Mortar**

Polymer modified & shrinkage compensated

Medium weight with excellent adhesion to concrete

MICROTEC® fibre-reinforced

High resistivity (>15,000Ω cm)

Contains active corrosion inhibitor

Approved for use with potable (drinking) water - independent testing confirms conformity with the requirements of AS4020.2005



ARDEX Australia Pty Ltd
20 Powers Road
Seven Hills NSW 2147
1300 788 780
technicalservices@ardexaustralia.com
www.ardexaustralia.com

ARDEX New Zealand Ltd
15 Alfred Street
Onehunga, Auckland 1061
Phone: 0800 227 339
Email: info@ardexnz.com
Internet: www.ardex.co.nz

ARDEX BR 345

MICROTEC® Fibre-Reinforced, High Resistivity, Polymer-Modified, Structural Concrete Patching and Repair Mortar

DESCRIPTION

ARDEX BR 345 MICROTEC® Fibre-Reinforced, High Resistivity, Polymer-Modified, Structural Concrete Patching and Repair Mortar is designed for reinstating concrete surfaces damaged through concrete spalling and other chemical or mechanical causes. ARDEX BR 345 is a high-build patching mortar and is capable of being applied up to a thickness of 80mm on vertical, horizontal and overhead surfaces. It is designed to be used for applications where high resistivity of the mortar is required. For applications where anodes are required, use ARDEX BR 340 instead.

- Polymer modified
- Shrinkage compensated
- MICROTEC® fibre-reinforced
- Medium weight
- Excellent adhesion to concrete
- Contains active corrosion inhibitor
- High resistivity (>15,000Ω cm)
- Approved for use with potable (drinking) water - independent testing confirms conformity with the requirements of AS4020.2005

PREPARATION

The substrate must be clean, sound and free from all grease, oil, dust and other surface contaminants such as curing membranes. Damaged or contaminated concrete must be removed to obtain a good bond to the substrate. Cut the edges of the repair vertically to a minimum depth of 10mm. All surface laitance must be removed. Exposed reinforcing steel should be cleaned to remove all residual rust and concrete residue. In accordance to best practice, as outlined in the ACRA Guide to Concrete Repair and Protection Concrete HB84-2006 Chapter 6, concrete should be removed from around and behind all corroding rebar to avoid future contamination of the repaired area. Exposed reinforcing must be cleaned and protected with ARDEX BR 10 ZP Zinc-rich Primer in a continuous film.

PRIMING

The prepared substrate should be pre-soaked for 24 hours, but at least 2 hours before applying ARDEX BR 345. The surface should be mat damp but without standing water. ARDEX BR 345 does not require priming on a properly prepared substrate. If priming

is required, the substrate should be primed by employing one of the following methods:

1. A slurry bond coat of ARDEX BR 345 should be made to a stiff, brushable consistency and applied to the dampened surface.
2. ARDEX WR Prime should be applied and worked into the substrate. Once the ARDEX WR Prime has reached initial cure, ARDEX BR 345 can be applied.

If a bonding bridge is used, apply the ARDEX BR 345 as soon as the bridge is tacky enough to hold the weight of the mortar. ARDEX BR 345 should be applied wet-on-wet. Do not let the bonding layer dry out completely. If the surface is too wet or too dry, application of ARDEX BR 345 may be difficult.

Priming for reinforcement steel

Use ARDEX BR 10 ZP Zinc-rich Primer as primer for steel reinforcement in concrete. Apply ARDEX BR 10 ZP in a continuous film; apply a second coat if needed. ARDEX BR 10 ZP should be cured prior to applying the repair mortar.

MIXING

Use approximately 3.0 - 3.3L water per 20Kg bag of ARDEX BR 345. Measure the appropriate amount of water into a clean suitable sized pail and then add approximately half to two-thirds of the powder to the water while mixing with a heavy duty electric drill and spiral mixing paddle on slow-medium speed (approx. 400-600 rpm). Mix to fully wet-out the powder; then, add the remaining powder fully mixing to disperse the powder. Once all of the powder has been added, mix for approximately 2 to 3 minutes to fully homogenise. Let the mixed mortar sit for 1 – 2 minutes, then briefly mix the mortar again prior to placement.

APPLICATION

ARDEX BR 345 is to be applied onto the prepared primed substrate. Make sure that the patching mortar is applied whilst the priming layer is still wet (wet-on-wet). Apply using a trowel or by hand (wearing chemically resistant gloves). Make sure that the material is sufficiently forced and compacted into cracks and holes to ensure that all voids are filled.

Note: Minimum application thickness is 10mm. If repair mortar slumps, remove all ARDEX BR 345 and re-apply after re-priming the substrate, then apply the repair mortar at a reduced thickness.

FINISHING

Once the mortar has set, and the surface is hard enough, work can begin on the surface finish. The surface finish can be dense and smooth by using a wooden or plastic float, or coarse and sandy by using a sponge to give the required effect.

CURING

It is recommended to apply an approved curing compound immediately after finishing. Curing compounds should be sprayed onto the surface of the finished ARDEX BR 345 according to the Technical Datasheet of the curing compound.

OVERCOATING

The repaired patch can be rendered over with a suitable ARDEX Render or Coating. Refer to relevant Technical Datasheets for application of overcoats.

SET TIMES

Pot Life @ 23°C: 30 – 45 min

Initial Set: 45 - 90 min

Final Set: 90 min - 3 hrs

PACKAGING

ARDEX BR 345 is packed in polylined paper sacks – net weight 20kg.

COVERAGE

20kg of powder makes approximately 12.6 litres of mortar. At 10mm thickness: approximately 1.25m²

SHELF LIFE

ARDEX BR 345 has a shelf life of 12 months when stored in the original unopened packaging, in a dry place at 23°C and 50% relative humidity.

CLEAN UP

Clean all tools in water immediately after use.

Pay Attention to the following:

The repaired area should always be overcoated with an appropriate coating or sealer. ARDEX BR 345 is not meant to be left exposed.

CLEAN UP

Clean all tools in water immediately after use.

SAFETY DATA

This product may cause irritation and an allergic reaction to the skin. It may cause serious eye injury and irritation to the respiratory system. In case of contact with the eyes rinse with running water (15 mins) including removal of contaminated clothing. Wear protective gloves, clothing, eye and face protection. Avoid inhaling dust/ fume/ gas/ mist/ vapours/ spray. Ensure adequate ventilation during mixing and application. Store locked up. Check with your local Council regarding the disposal of contents. Keep out of the reach of children. Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. Additional information is in the Safety Data Sheet (SDS) at www.ardexaustralia.com

TECHNICAL DATA

Water	3.0 - 3.3l/20kg
Wet Density	~1.88g/cc
Pot Life @23°C	45 - 90m
Initial Set	45 - 90m
Final Set	90m - 3h

EN 1504-3 R3 TESTING DATA

	Test Method	R3 Requirements	Typical Results
Compressive Strength	EN 12190	≥ 25MPa	1d ~10MPa 7d 20-30MPa 28d 30-45MPa
Chloride Ion Content	EN 1015-17:2000	≤ 0.05%	0.005%
Adhesive Bond	EN 1542	≥ 1.5MPa	≥ 1.5MPa
Shrinkage and Expansion	EN 12617-4	≥ 1.5MPa	≥ 1.5MPa
Carbonation Resistance	EN 13295:2004	d ≤ control concrete	pass(C0.45)
Elastic Modulus	AS 1012.17*	≥ 15GPa	16.9GPa
Coefficient of Thermal Expansion	AASHTO T336-11**	declared value	10.1ms/°C
Capillary Absorption	EN 13057:2002	≤ 0.5kg/(m ² Xh ^{0.5})	0.10kg/(m ² Xh ^{0.5})

ADDITIONAL TECHNICAL DATA

	Test Method	Typical Results
Flexural Strength	EN 12190	28d ~8MPa
Drying Shrinkage 23°C 50% RH	AS 1478.2-2005	7d <400ms 28d <700ms
Bulk Resistivity	internal method	28d >15,000 Ω.cm 56d >20,000 Ω.cm

*AS1012.17 done in place of EN 13412

**AASHTO T336-11 done in place of EN1770

ms = micro strains

DISCLAIMER

The technical details, recommendations and other information contained in this data sheet are given in good faith and represent the best of our knowledge and experience at the time of printing. It is your responsibility to ensure that our products are used and handled correctly and in accordance with any applicable Australian Standard, our instructions and recommendations and only for the uses they are intended. We also reserve the right to update information without prior notice to you to reflect our ongoing research and development program. Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may affect specific installation recommendations. The supply of our products and services is also subject to certain terms, warranties and exclusions, which may have already been disclosed to you in prior dealings or are otherwise available to you on request. You should make yourself familiar with them.

ARDEX Australia Pty Ltd
1300 788 780

Toll Free Technical Services:
1800 224 070 (Australia)

ARDEX New Zealand Ltd
0800 227 339

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