

AQUA BOND

BONDING AGENT

Synthetic-rubber latex admixture for improving the adhesion and performance of cement-based mortars, screeds, renders and bonding slurries.

Reference sheet – pending validation. The technical and performance values on this datasheet are reference figures and have not yet been confirmed by independent laboratory testing or production QC for this specific formulation. Replace or confirm every value below (density, pH, dry solids, viscosity, shelf life, and all performance results) with your own lab and production data before relying on this sheet for site use or commercial claims.

Product overview

Product type	Water-based synthetic-rubber (SBR) latex admixture
Colour	White
Density (reference)	1.02 g/cm ³
pH (reference)	8
Dry solids (reference)	36%
Application temperature	+5°C to +40°C

Technical characteristics

The reference product is a stable water dispersion of an SBR (styrene-butadiene rubber) synthetic elastomer with a low glass transition temperature. The elastomer contributes elasticity and ageing stability. When added to cement and aggregate mixes it improves adhesion, plasticity, thixotropy, water retention and workability, giving:

- Better adhesion to substrates
- Higher compressive and flexural strengths
- Higher abrasion resistance
- Higher impermeability
- Better freeze-thaw resistance
- Better resistance to diluted acids, saline solutions and oils

Where to use

- Improve mechanical and adhesive characteristics of cement-based screeds, renders and thin smoothing layers
- Highly adhesive cement bonding slurries
- High-strength interior and exterior cement screeds and renders
- Bonding slurries for conventional bonded screeds
- Adhesive shotcretes for bonding renders
- Mortars for filling holes, reconstructing damaged areas and finishing concrete elements
- Mortars for high-abrasion surfaces such as industrial floors, ramps and channels

Recommendations

- Do not use undiluted Aqua Bond as a primer or slurry on its own — mix with Portland cement or another specified cementitious binder
- Do not use below +5°C or above +40°C
- Protect fresh applications from excessively rapid drying in hot or windy conditions
- Use aggregate particle sizes appropriate to the application thickness and observe the required water/cement ratio
- If using a concrete mixer, do not mix for more than 3 minutes to avoid excessive air entrainment

Reference performance (pending validation)

Compressive strength, 1 day	7 MPa (reference)
Compressive strength, 7 days	25 MPa (reference)
Compressive strength, 28 days	33 MPa (reference)
Adhesion to substrate, 28 days (EN 1542)	> 2.0 MPa (reference)
Resistance to damp / ageing	Excellent (reference)
Resistance to solvents and oils	Mediocre (reference)
Resistance to acids and alkalis	Fair (reference)
Temperature resistance	−30°C to +90°C (reference)

This datasheet is a formatting draft prepared for AQUA BOND from the values available at the time of writing. It has not been independently verified as a specification for this product and is provided without guarantee. Site conditions and application methods are outside our control; the user is responsible for confirming suitability for the intended use. This edition cancels any previous ones for the same product until replaced with validated data. — aquaflexs.org

Application procedure

1. Substrate preparation — The substrate must be solid, compact and clean. Remove loose material, dust, concrete crusts, oil, form-release agents and paint by suitable cleaning methods. Thoroughly wet the substrate, leaving no standing excess water.

2. Bonding screeds (10-35 mm)

Component	Mix A	Mix B
Aqua Bond	45 kg	50 kg
Water	135 kg	150 kg
Portland cement	350 kg	400 kg
Aggregates	1550 kg	1500 kg

Max. aggregate size to suit screed thickness, limit 8 mm. Apply theadd to the mixer, then add cement and aggregates. Mix 2-3 Aqua Bond/cement bonding slurry before laying, and cast the freshminutes until smooth and even; do not over-mix.

3. Floating screeds (min. 35 mm) — dilute Aqua Bond 1:4 with water.

Component	Mix A	Mix B
Aqua Bond	30 kg	35 kg
Water	120 kg	140 kg
Cement	300 kg	350 kg
Mixed aggregates (0-8 mm)	1600 kg	1550 kg

Reference curing time: at least two weeks under normal temperature and humidity.

4. Render — Aqua Bond 1 kg • Water 4 kg • Cement 5.5 kg • Aggregates (0-3 mm) 20 kg.

Scratch coat: Aqua Bond 1 kg + water 1 kg + cement 3.5 kg + aggregates (0-2 mm) 3.5 kg.

5. Filler mortar — Aqua Bond 1 kg • Water 2.5 kg • Cement 8 kg • Aggregates (0-3 mm) 16-24 kg.

6. Bonding slurry — Aqua Bond 1 kg + water 1 kg + cement 4 kg.

Mixing — Dilute Aqua Bond with water per the selected ratio, prevent rapid evaporation and plastic-shrinkage cracking. Protect or damp-cure during the first hours.

Curing — In warm or windy conditions, cure carefully to prevent rapid evaporation and plastic-shrinkage cracking. Protect or damp-cure during the first hours.

Cleaning — Clean tools with water before setting begins; mechanical cleaning is required after hardening.

Dosage & coverage (reference)

Application	Aqua Bond : Water	: Cement/Aggregate	Aggregate	Consumption
Bonding screeds 10-35 mm	1:3	1:4	0-8 mm	40-50 g/m ² /mm
Floating screeds >35 mm	1:4	1:5	0-8 mm	30-40 g/m ² /mm
Renders	1:4	1:3.6	0-3 mm	60-70 g/m ² /mm
Renders (ready-mix reference)	1:5	-	-	70-80 g/m ² /mm
Scratch-coat layers	1:1	1:1	0-2 mm	220-230 g/m ²
Filler mortar	1:2.5	1:3	0-3 mm	50-60 g/m ² /mm
Bonding slurry	1:1	-	-	300-310 g/m ²

Ratios are for dry aggregates — reduce the water-dilution proportion if aggregates are damp or wet.

Storage & safety

Storage: reference shelf life 24 months in unopened original packaging. Protect from frost.

Safety: use protective gloves and goggles and follow normal chemical-handling precautions. Refer to the current Aqua Bond Safety Data Sheet before professional use.

Before publishing or selling on this basis: confirm density, pH, dry solids, viscosity, shelf life, packaging, coverage rates and every performance figure above with your own production batch testing and, where relevant, third-party laboratory certification.