

Brushbond*

Acrylic polymer modified protective and decorative coating for concrete & masonry

Uses

To protect atmospherically exposed reinforced concrete structures from attack by acid gases, chloride ions, oxygen and water. The product is also suitable to protect other cementitious substrates and masonry. It is suitable for use on all types of structures, including those in coastal environments. It is equally suitable for new and existing structures.

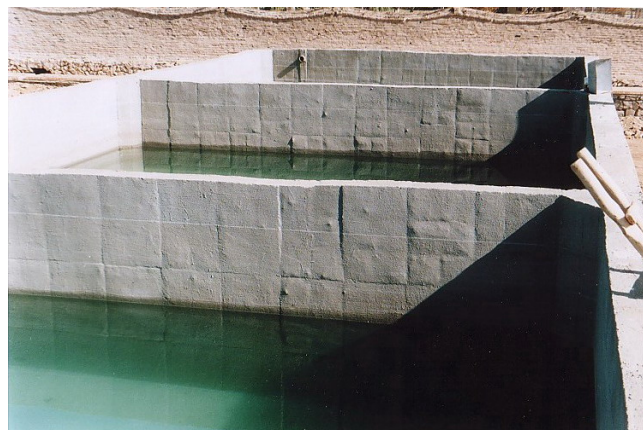
The product is designed to re-face and even out variations in concrete and masonry surfaces and bridge shrinkage cracks. It provides a seamless, flexible waterproof coating which is suitable for water tanks, reservoirs and rooves. The product provides a tough durable wear resistant coating which can withstand light pedestrian traffic, has excellent weather resistance for exterior applications and provides a decorative function.

Advantages

- Excellent barrier to carbon dioxide, chloride ions & water
- Allows water vapour to escape from the structure
- Waterproof – Suitable for water retaining structures
- High resistance to the effects of long-term weathering, durable in all climatic conditions including UV attack
- Minimum surface preparation needed low labour costs
- Non toxic – Ideal for potable water tanks
- Flexible, with thermal expansion similar to concrete
- Covers honeycombed&pitted poured concrete effectively

Standards compliance

Tested by Al Futtain-Wimpey, Dubai to BS6920 section 4.2.8 immersion test – negligible effect on potable water. Tested to ASTM C190, ASTM C348 & ASTM C321.



Description

Brushbond comprises a two component acrylic polymer modified cementitious coating supplied in ready mix kits. It requires only the site addition of clean water to produce an easily brushable coating. Brushbond can be simply applied by stiff brush, roller, spray or trowel to obtain the desired texture.

Properties

	@ 20°C	@ 35°C
Pot life	1 hour	20 minutes
Mixed density	1.65 gm/cm ³ (brushable consistency)	
Colour	Grey & white (special colours on request)	
Application temp.	Not less than 5°C	
Toxicity	Negligible effect on potable water (BS6920, sec. 4.2.8)	
Properties (cured)	Brushbond	Slurry coat ¹
Tensile strength	5.0 N/mm ²	2.0 N/mm ²
Compressive strength	39 N/mm ²	18 N/mm ²
Flexural strength	11 N/mm ²	4 N/mm ²
Bond strength	3.5 N/mm ²	0.5 N/mm ²
Chloride ion resistance	Coated	Uncoated
1 month (% Cl detected)	0.0004	0.0063
6 months (% Cl detected)	0.0004	0.0344
Moisture vapour permeability flux	204.1 (g/m ² /day)	844.3 (g/m ² /day)
Carbonation resistance depth of penetration	1 mm	7 mm

⁽¹⁾: A 1:3 sand/cement slurry coat adjusted with water for same workability as mixed Brushbond for brush application

8 hours test on 7 days aged sample: 86% reduction in carbonation. Brushbond acts as a significant barrier to chloride, stopping a minimum 92% of chloride ions when compacted to an uncoated substrate.

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Specification clauses

Acrylic polymer modified protective/decorative coating

The protective coating shall comprise specially selected cements, graded hardwearing aggregates and additives supplied in powder form together with a liquid component of blended acrylic co-polymers and wetting agents. The total dry film thickness of the coating shall not be less than 2 mm and shall be capable of providing resistance to wear and weather and good chemical resistance to mild inorganic acid solution, diesel oil, gasoline, chlorides, de-icing salts, effluents and organic solvents. It shall exhibit positive water pressure resistance up to 7 metre head, dependent on coating thickness.

Instructions for use

Surface preparation

All surfaces should be dry and free from contamination such as oil, grease, loose particles, delayed matter, moss, algal growth, laitance and all types of mould release oils and curing compounds. This is best achieved by lightly grit blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit-blasting process. Spalled and deeply disintegrated concrete should be removed to sound concrete and repaired with a Fosroc repair system.

For further advice, consult the local Fosroc office. It is essential that all surfaces to be treated be pre-soaked with clean water prior to application of Brushbond.

Mixing

Brushbond liquid concentrate should be poured from the plastic container in to the metal drum provided. An equal volume (4 litres) of clean fresh water is added for brush application consistency and mixing commenced with a propeller agitator attached to a slow speed drill (500 r.p.m.). The powder component should be added gradually to the liquid to avoid lump formation and mixed for 2 to 4 minutes. Brushbond should be immediately used after mixing.

Do not mix more material than can be used within the pot life. Keep mixing Brushbond during the application.

Mixing ratio

Application	Brush	Spray	Trowel
Components			
Powder	23	23	23
Liquid	4	4	4
Water	4	6 - 7	2

Application

For best results, surface should be damp. In order to obtain the protective properties of Brushbond, it is important that the correct rates of application are observed. Use a short stiff brush preferably 120 – 200 mm width and apply in one or two coats as required.

Spray or trowel applications should use the correct mixing ratio to obtain satisfactory consistency. In hot climatic conditions, it is likely that spray application will be the best for exterior decorative finishes. Nozzle size should be 3 - 4 mm and pressure of 6 – 8 bars should be used.

The application of Brushbond should not commence if the temperature of the substrate is below 5°C. Application of Brushbond on hot substrates, i.e. over 40°C surface temperature will need the application of a primer coat of mixed Brushbond and water in slurry like consistency and supply Brushbond over the primer whilst it is still wet.

It is recommended that for general resurfacing each coat should be 1 mm thickness. Areas subjected to light foot traffic should receive at least 2 mm thickness of Brushbond and an additional 2 mm should be applied if conditions are moderate to heavy pedestrian traffic.

If in doubt about the condition of the substrate, the local Fosroc office should be consulted.



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Cleaning

Brushbond should be removed from tools and equipment with clean water immediately after use. Hardened material can be removed mechanically.



Limitations

Brushbond is formulated for application to clean, sound concrete or masonry. Where subsequent coatings or paints are required, trials should be conducted to ensure compatibility. Brushbond is compatible with most forms of subsequent coating. Compatibility and soundness should be assessed on a trial area. For further advice, consult the local Fosroc office.

Application of Brushbond should not commence if the temperature of the Brushbond is below 5°C. Brushbond should not be applied where there is a likelihood of exposure to frost within 48 hours of the application. The product should not be applied in windy conditions where early age dust adhesion may occur, or where rain is likely within 2 hours at 20°C or 20 hours at 5°C (up to 80% RH). It should not be applied when the prevailing relative humidity exceeds 90%.

Estimating

Supply

Industrial kit	27 kg packs consist of:
Powder	23 kg bag
Liquid	4 litre can

Coverage (1 mm thickness)

Brush applied	18 – 20 m ² per kit / 1 coat
Spray applied	22 – 24 m ² per kit / 1 coat
Trowel applied	14 – 16 m ² per kit / 1 coat

The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Technical support

Fosroc offers a comprehensive technical support service to specifiers, end users & contractors. It is also able to offer on-site technical assistance, AutoCAD facility & dedicated specification assistance in locations all over the world.

Storage

All products have a shelf life of 12 months if kept in a dry store in the original unopened packs.

Store in cool, dry conditions, away from sources of heat and naked flames, in the original unopened packs. If stored at high temperatures and/or high humidity conditions, the shelf life may be reduced. Brushbond liquid component should be protected from frost.

Precautions

Health and safety

Brushbond contains cement powders which when mixed or become damp, release alkalis which can be harmful to the skin. During use avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provides additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. If swallowed, seek medical attention immediately - do not induce vomiting.

For further information, refer to the product Material Safety Data Sheet.

Fire

Brushbond components are non-flammable.

Additional information

Brushbond was formerly known as Renderoc C.

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The Right Chemistry for Construction

Fosroc is one of the world's major manufacturers of advanced technology chemical based products for the construction and refurbishment industries. It operates internationally through a network of operating companies, licensees, distributors and agents.

Having over 70 years experience and using global resources for research and technical development, Fosroc has built a substantial worldwide reputation in manufacturing the most comprehensive range of high performance construction chemicals:

- Concrete admixtures
- Surface treatments
- Grouts and anchors
- Concrete repair
- Industrial flooring
- Protective coatings
- Joint sealants
- Waterproofing
- Adhesives
- F.R.P Structural Strengthening
- Specific building products

* Denotes the trademark of Fosroc International Ltd.



Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Service.

Fars Iran Limited

No. 9, 25 th St., Khaled Eslamboli
(Vozara) Ave., Tehran 15139 - Iran

telephone:
+98 (21) 88719021

fax:
+98 (21) 88721664

email:
iran@fosroc.com

www.fosroc.com

