



The Yellow Book



The Serious Brand

As the originators of Concrete and Mortar Admixtures with a history going back over 50 years, generations of Builders and Specifiers have grown up trusting the FEB brand to meet their most exacting requirements when it comes to selecting high performance construction chemicals.

Serious About Products

Today the FEB range encompasses the latest in Admixture technology, Structural Waterproofing, Bonding Agents, Concrete Repair, Cementitious Grouts, Adhesives and Screeds, Surface Protectors and Remedial Waterproofing, with formulations continually tested and improved to meet the latest regulatory standards.

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The Serious Brand

Serious About Service

Now part of Everbuild Building Products Ltd, the FEB range is entirely produced in the UK to a stringent Quality Control system accredited to ISO9001.

With state of the art manufacturing facilities able to cope with high volume demand comes a commitment to be in stock of 99% of all lines, ready to go on a wagon the day it's ordered. In house distribution driven by sophisticated electronic stock rotation and order collation ensures speed is combined with accuracy.

Serious About Continuity

When you stock, use or specify FEB branded construction chemicals you have the reassurance you are buying into a long history of quality, with formulations that have remained fundamentally unchanged apart from technical improvements. Importantly, key product formulations such as Febmix, Febproof, Febond, Febsilicon, Aquaseal and many more have been retained by Everbuild so regular users of these products will notice no difference at all to the products they have been using for many years.

Serious – In Store

With the acquisition of the FEB and AQUASEAL brands by Everbuild, the entire range has been updated to give clear and concise product details whilst retaining the all important historic FEB logo and core product names.

Serious – On Site!

Over the years Feb products have been used on countless landmark projects, from providing Admixtures for the concrete used to construct the last Mersey Tunnel in 1971, through to the recent completion of Wembley Stadium.

Successful use and specification is backed up by on site technical training and assistance with knowledgeable technicians available to all FEB customers.

Serious About Information

We understand how important it is that both our stockists and end users can easily access all the information they need. The FEB web site provides instant access to the entire FEB range with immediate links to product technical and health and safety data.



FEB display stands are available to stockists, subject to minimum purchase requirements



PLEASE NOTE:- As our stockists give us their loyalty, we trust you will appreciate that FEB operates a strict merchant and distributor only policy, and as such are unable to supply direct to end users.

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Admixtures & Building Chemicals





Febmix Admix - The Original

Mortar Plasticiser

For Brick and Block Laying

- Easier and faster to spread mortar
- Improved frost resistance
- Original vinsol resin formula

Colour	Product Code	Pack Size	Box Qty
Dark Brown	FBMIX5	5L	4
	FBMIX25	25L	1
	FBMIX205	205L	1



Admixtures & Building Chemicals

Febmix Admix - The Original

Product Description

FEBMIX ADMIX is a liquid, air entraining mortar plasticiser that replaces lime or supplements in the mix and reduces the amount of water required to achieve the desired workability, thus reducing the possibility of shrinkage, which can result in cracking and crazing. Minute bubbles of air entrained in the hardened mortar provide space for the expansion of water when freezing occurs without disturbance to the body of the mortar.

FEBMIX ADMIX is recommended in all mortars - whenever a more plastic and easily manageable mortar is required.

FEBMIX ADMIX conforms fully to the requirements of BS4887: Pt 1 1987 and has been tested to the requirements of EN 934 Part 3.

Typical Uses

- FEBMIX ADMIX is an admixture for mortars that improves the workability of bricklaying and plastering mortars and significantly increases their resistance to freeze/thaw cycles.

Features & Benefits

- Mix remains plastic for longer.
- Reduces bleed and segregation of mortar.
- Helps to reduce efflorescence.
- Easier and faster to spread mortar.
- Economical: cuts labour costs; less material used; less waste; cleaner and safer than lime.
- Improved frost resistance.
- Reduces shrinkage: cracking and crazing minimised.
- Improved weather resistance and durability.

Instructions for Use

Application

FEBMIX ADMIX may either be pre-mixed with gauging water in a storage tank or introduced into the mixing drum at the same time as the water. When mortar is mixed by hand it should be well turned over to achieve maximum plasticity.

Dosage

FEBMIX ADMIX is added at the rate of approx 125-250 ml per 50 Kg of cement. Always use the type of sand recommended for a particular application. Test mixes should be carried out to determine optimum dosage.

Compatibility

FEBMIX ADMIX can be used with other admixtures provided these are added separately to the mix. It can be used for all types of Portland cement, including Sulphate Resisting. It can also be used in lime/sand mortars as a further precaution against frost.

Storage

Store at moderate temperatures. Will freeze, but can be reconstituted by stirring after thawing. Stir before use.

Shelf Life

Minimum two years when stored in accordance with the manufacturer's instructions.

Performance Data

Specific gravity @ 20°C	1.01
pH	11.8
Chloride Ion Content	< 0.1% (w/w) of admixture (nil)
Freezing Point	-2°C

Comparative mix designs with and without FEBMIX ADMIX - THE ORIGINAL as shown below:

Cement: Sand + FEBMIX ADMIX – THE ORIGINAL	Cement: Lime: Sand	Masonry: Cement: Sand	Typical Uses
1:3	1: ¼ :3	-	Laying load bearing brickwork.
1:4:5	1: 0.5: 4.5	-	External rendering (exposed positions) Backing and bedding coats (rough cast).
1:6	1:1:6	1:4:5	Internal plaster, floating coats, rendering.
1:3 to 1:6	varies	-	Brickwork pointing or re-pointing.
1:8	1:2:9	1:6	Laying blocks or concrete or sand/lime bricks.



Febmix Plus

Mortar Plasticiser

For Brick and Block Laying. Conforms to BS4887.

- Improves workability
- Easier and faster mortar spread
- Improves resistance to frost

Colour	Product Code	Pack Size	Box Qty
Red	FBMIXPLUS5	5L	4
	FBMIXPLUS25	25L	1
	FBMIXPLUS205	205L	1



Admixtures & Building Chemicals

Product Description

FEBMIX PLUS is a liquid ultra stable 'micro' air entraining mortar plasticiser designed to enhance the workability and freeze thaw resistance of brick and block laying mortars. FEBMIX PLUS may be used to replace or supplement the use of lime, and is designed to maintain efficiency with variations in cement and aggregate sources. FEBMIX PLUS complies fully to the requirements of EN934/3 Part 1/EN 934 Part 3 specification for air entraining (plasticising) mortar admixtures.

Typical Uses

- FEBMIX PLUS is designed to be used as a mortar plasticising admixture in brick and block laying mortars.

The 'micro' air entraining properties of FEBMIX PLUS greatly improves the workability of the mortar whilst reducing water demand, thus greatly reducing the likelihood of cracking and crazing. FEBMIX PLUS will also provide enhanced resistance to frost attack in both wet and hardened mortar state.

Features & Benefits

- Ultra stable bubble structure.
- Uniform air entrainment structure.
- Works with most types of Portland Cement and difficult sands.
- Increased resistance to damage by freeze/thaw.
- Reduced segregation and bleed.
- Non corrosive to embedded metals.
- Increased working time.
- Easier and faster mortar spread.
- Can be used to replace lime.
- Can be used with P.F.A. containing mortars.

Instructions for Use

Application

FEBMIX PLUS may be either pre-mixed with the water or added directly into the mix at the same time as the water. NB: The superior plasticising qualities of FEBMIX PLUS will result in a significant reduction in water demands of any given mix.

Dosage

FEBMIX PLUS is added at the rate of approx 125-250 ml per 50 Kg of cement. Always use the type of sand recommended for a particular application. Test mixes should be carried out to determine optimum dosage.

Compatibility

FEBMIX PLUS can be used with other admixtures provided these are added separately to the mix. It can be used for all types of Portland Cement, including Sulphate Resisting. It can also be used in lime/sand mortars as a further precaution against frost.

Storage

Store at moderate temperatures. Will freeze, but can be reconstituted by stirring after thawing. Stir before use.

Shelf Life

Minimum two years when stored in accordance with the manufacturer's instructions.

Performance Data

Specific gravity @ 20°C	1.004
pH	11.0
Chloride Ion Content	< 0.1% (w/w) of admixture (nil)
Freezing Point	-2°C

Comparative mix designs with and without FEBMIX PLUS as shown below:

Cement: Sand + FEBMIX PLUS	Cement: Lime: Sand	Masonry: Cement: Sand	Typical Uses
1:3	1: ¼ :3	-	Laying load bearing brickwork.
1:4:5	1: ¼ : 4¼	-	External rendering (exposed positions). Backing and bedding coats (rough cast).
1:6	1:1:6	1:4¼	Internal plaster, floating coats, rendering.
1:3 to 1:6	varies	-	Brickwork pointing or re-pointing.
1:8	1:2:9	1:6	Laying blocks or concrete or sand/lime bricks.

Febmix Plus



Febmix DH

Powder Mortar Plasticiser

Convenient Sachet Packs For Brick and Block Laying. Conforms to BS4887.

- Improved workability
- Prevents cracking, shrinking and crazing
- Reduces efflorescence
- Easy to dose, one sachet per bag of cement

Colour	Product Code	Pack Size	Box Qty
Brown Powder	FBMIXDH	250 sachets	1



Admixtures & Building Chemicals

Febmix DH

Product Description

FEBMIX DH is a mortar plasticiser in powder form for use as an alternative to lime or as a supplement to lime to aid mortar durability. Complies with EN934/3. FEBMIX DH will entrain microscopic air bubbles into cement mortars in a controlled manner as specified in EN934. Air entrained mixes produce greatly enhanced working properties with a reduced demand for mixing water. FEBMIX DH also improves frost resistance in both freshly laid and hardened mortars, as the microscopic air bubbles entrained provide space for expansion of water due to freezing.

Typical Uses

For use as an admixture for mortars to improve workability, in both bricklaying and rendering applications.

Features & Benefits

- Economical: - reduced labour costs - reduced wastage - increased spread rates.
- Helps reduce efflorescence.
- Reduces bleed and segregation in the mix.
- Improved bond.
- Improves frost resistance.
- Reduces shrinkage.

Instructions for Use

FEBMIX DH may be added directly into the mixing drum after the addition of sand or pre-mixed with the gauging water. The use of FEBMIX DH pre-weighed sachets introduced directly to the mix optimises control of dosage and minimises wastage.

Mixing

The action of FEBMIX DH is entirely physical and therefore requires an efficient mixing action. If mixing is to take place by hand the mix must be well "turned over" to achieve the maximum plasticising effect. Mortar selection should be made in line with the relevant National Standards and Codes of Practice.

The table below gives indicative mix designs relative to uses with and without FEBMIX DH. Portland Cement: Lime, sand mixes which also include an air entraining plasticiser have been shown to be particularly durable in accelerated testing.

Dosage

FEBMIX DH is added at the rate of 1 sachet per 25Kg bag of cement. Always use the type of sand recommended for a particular application. Test mixes should be carried out to determine optimum dosage.

Storage

Store in cool, dry conditions.

Shelf Life

Minimum two years when stored in accordance with the manufacturer's instructions.

Performance Data

Chloride Ion Content	< 0.1% (w/w) of admixture (nil)
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Following table shows relative mix designs, with and without FEBMIX DH:

Cement: Sand + FEBMIX DH	Cement:Lime Sand	Typical Uses
1:3	1:¼:3	Laying load-bearing brick work.
1:4	1:0.5:4.5	External Rendering (exposed positions). Backing and bedding coats (rough cast).
1:6	1:1:6	Internal plaster floating coats. External rendering.
1:3 to 1:6	Varies	Brickwork, pointing or re-pointing.
1:8	1:2:9	Laying blocks and concrete or sand-lime bricks.



Febproof Plus

Waterproofer and Plasticiser

For Screeds, Mortars and Non-Structural Concrete Rendering. Conforms to BS4887.

- Improved workability
- High resistance to water
- Reduces incidence of efflorescence

Colour	Product Code	Pack Size	Box Qty
Amber	FBPROOFPS5	5L	4
	FBPROOFPS25	25L	1



Admixtures & Building Chemicals

Product Description

FEBPROOF PLUS reduces water absorption and makes mortar or non-structural concrete less permeable. Due to its strong air-entraining plasticiser, the water cement ratio is much lower for the same workability. FEBPROOF PLUS has been tested to the requirements of EN 934 Part 3.

Typical Uses

FEBPROOF PLUS is suitable for use in rendering finishes and pointing mortars. It is also used in reconstructed stone and non-structural concrete members.

- External Rendering.
- Special Finishes.
- Pebble dash.
- Roughcast.
- Stucco etc.
- Reconstructed stone.

Features & Benefits

- Improves weathering properties.
- Reduced suction aids pebble dashing – larger areas covered easily.
- Improves water resistance.
- Reduces onset of efflorescence.
- Improved application properties.
- Supplements/replaces lime.
- Drying shrinkage, crazing and cracking reduced.
- Improved frost resistance.

FEBPROOF PLUS contains a highly hydrophobic material which is dispersed throughout the mix and thus reduces moisture penetration.

FEBPROOF PLUS also entrains air and this reduces capillary and water channel development, thus ensuring greatly increased water tightness and resistance to frost. In addition, due to its plasticising action, reductions in water content of up to 20% are attained. FEBPROOF PLUS slightly retards the mix, e.g. A 3:1 sand/cement mix will be retarded by about an hour.

Instructions for Use

Application

FEBPROOF PLUS is ready for use and is added to the mixing water at the selected dosage rate.

Dosage

0.5-1 Litre per 50kg cement.

Storage

Protect from frost. Stir before use.

Shelf Life

Minimum two years if stored in accordance with manufacturers instructions in unopened containers.

Performance Data

Specific gravity @ 20°C	1.010
pH	11.60
Chloride Ion Content	< 0.1% (w/w) of admixture (nil)
Freezing Point	-3°C
Water Absorption (dosage 750ml/50kg cem)	5% compared to 15% for a standard 4:1 sand/cement mix
Set time ASTM C403: 1990 (dosage 750ml/50k cem)	100% longer than control

Febproof Plus



Rendamix

Waterproofer & Retarder

For Cement Rendering & Dashing Mortars.
Conforms to BS4887.

- Improves spread
- Increases open time
- Salt inhibitor

Colour	Product Code	Pack Size	Box Qty
Amber	FBRENDA5	5L	4
	FBBRENDA25	25L	1



Admixtures & Building Chemicals

Rendamix

Product Description

FEB RENDAMIX is a water resisting, retarding and plasticising admixture for use in sand: cement rendering mortars.

Typical Uses

As an admixture to exterior or above ground cementitious render finishes such as dashing, harling, rough cast and internally after installation of injection DPC's.

Features & Benefits

- The utilisation of FEB RENDAMIX's air entraining and retarding properties allows larger working areas to be covered in a single application process.
- Significant improvement in resistance to water penetration.
- Significant reduction in water demand of a given mix, resulting in reduction in water bleed both on the 'spot board' and in situ.
- Improved durability.
- Inhibits transmission of hygroscopic salts.
- Enhances insulation properties.

Instructions for Use

Preparation of Substrate

The substrate to which the render is to be applied should be thoroughly sound and uncontaminated. Any existing coatings must be removed prior to the commencement of rendering. When the substrate is found to be highly porous, long term bond and durability can be improved by the use of a bonding slurry consisting of cement and FEBOND SBR mixed at 1-2:1. This should be applied to the prepared substrate immediately prior to application of the render, which should be applied 'wet on wet'.

Mixing

Selection of materials and correct mix designs relative to substrate and exposure levels are of paramount importance. Tables A and B give guidance on appropriate mix designs. Selection

of materials and application of the external render systems should be in line with BS 5262 1991, Code of Practice for External Render and BS8000 Part 10:1995 Code of Practice for Plastering and Rendering.

Addition

FEB RENDAMIX is supplied ready to use and should be added to the mixing water at a rate of one part FEB RENDAMIX to 20/40 parts water. This corresponds to a dosage rate of 500 ml to 1000 ml per 50 Kg of cement. The plasticising action of FEB RENDAMIX should be used to full effect by reducing the water/cement ratio; a reduction in water content up to approximately 20% is achievable compared to an unplasticised mix.

Care should be taken not to overmix.

Dosage

500 ml to 1000 ml per 50 Kg kilos of cement.

Storage

Protect from frost. Stir before use.

Table A: Mixes suitable for external renders

Mix Designation	Cement:Sand + FEB RENDAMIX
I	N/A
II	1:3 to 4
III	1:5 to 6
IV	1:7 to 8
V	N/A

Shelf Life

Up to two years when stored at normal temperatures in accordance with the manufacturer's instructions.

Table B: Suggested mixes for external renderings relative to background exposure conditions and required finish

Background Material	Type of Finish	First and Subsequent undercoats		
		Severe	Moderate	Sheltered
Dense, Strong, Smooth	Wood Float	II	II	II
	Scraped or Textured	II	II	II
	Roughcast	II	II	II
	Dry Dash	II	II	II
Moderately Strong, Porous	Wood Float	III	III	III
	Scraped or Textured	III	III	III
	Roughcast	II	II	II
	Dry Dash	II	II	II
Moderately Weak, Porous	Wood Float	III	IV	IV
	Scraped or Textured	III	IV	IV
	Roughcast	III	III	III
	Dry Dash	III	III	III

Background Material	Type of Finish	Final coat		
		Severe	Moderate	Sheltered
Dense, Strong, Smooth	Wood Float	III	III	III
	Scraped or Textured	III	III	III
	Roughcast	II	II	II
	Dry Dash	II	II	II
Moderately Strong, Porous	Wood Float	III	IV	IV
	Scraped or Textured	III	IV	IV
	Roughcast	II	II	II
	Dry Dash	II	II	II
Moderately Weak, Porous	Wood Float	III	IV	IV
	Scraped or Textured	III	IV	IV
	Roughcast	III	III	III
	Dry Dash	III	III	III

NB: Types of finish requiring strong mix designs should not be considered for weak backgrounds. In seaside or marine environments where soluble salts in the background may be present sulphate resisting cement should be used as an alternative to OPC.

Performance Data

Specific gravity @ 20°C	1.02
pH	12
Chloride Ion Content	< 0.1% (w/w) of admixture (nil)
Freezing Point	-3°C
Water Absorption (dosage 750ml/50kg cem)	5% compared to 15% for a standard 4:1 sand/cement mix
Set time ASTM C403: 1990 (dosage 750ml/50k cem)	100% longer than control



Febspeed

Accelerator and Hardener

For Mortar, Concrete, Renders and Screeds.

- Reduces setting time
- Improves frost resistance

Colour	Product Code	Pack Size	Box Qty
Clear	FBSPEED5	5L	4
	FBSPEED25	25L	1



Admixtures & Building Chemicals

Product Description

FEBSPEED is a liquid admixture that accelerates the setting time of mortar, non-reinforced concrete, renders, screeds and paving's. FEBSPEED has been tested to the requirements of EN 934 Part 3.

Typical Uses

- For use in the acceleration of screeds and paving where a reduction in set time is required; also suitable for use as an accelerator in non reinforced concrete, as a super rapid hardener for plugging of leaks in concrete.
- FEBSPEED can also be used as an aid to cold weather working.

Features & Benefits

- Multi-faceted product.
- Reduces setting time.
- Increased early strength.
- Minimises waiting times on finishing operations.
- Reduces strike times in production.
- Increases productivity.
- Optimises mould usage.
- Economical in use.

Instructions for Use

As an Accelerator:

Pre-mix FEBSPEED with gauging water; check amount of water to be used in the mix, sand grading and condition. Table A gives indicative dosage rates relative to cement and water addition rates:

As a Floor Hardener:

Incorporate FEBSPEED with gauging water at a rate equivalent to 2.5 to 5 litres of FEBSPEED per 50 Kgs of cement used. The concrete should not be gauged weaker than 1:2:4. If granolithic topping should be appropriate then a specification of 2 parts 3-6 mm clean grano (no dust) to 1/2 part concreting sand to 1 part cement. For selection of relevant mix designs and installation techniques refer to BS 8000 Part 9 and BS 8204 Part 2.

NB: Many of the benefits to be gained from the use of FEBSPEED as a hardener can be negated by bad practice and placement techniques. Refer to relevant BS document for guidance on placement, curing etc.

As a Super Rapid Hardener:

FEBSPEED may be mixed neat with **fresh** ordinary Portland Cement in small quantities for use immediately as a plugging compound.

Storage

Protect from temperature extremes. Will freeze but can be reconstituted by stirring after thawing.

Shelf Life

Minimum two years when stored in accordance with the manufacturer's instructions.

Table A

	MIXING PROPORTION TO CEMENT USED	MIXING PROPORTION TO GAUGING WATER	AMOUNT OF FEBSPEED PER CUBIC METRE OF CONCRETE/MORTAR
Concrete	5 Litres FEBSPEED per 100Kg of cement	5 litres FEBSPEED to 40 litres mixing water*	11.25 litres
Cement Mortar		2.5 litres FEBSPEED to 35 litres water	10 litres

*Note: Based on commonly used mixes having a fairly high slump with approximately 100 litres of mixing water used per cubic metre of concrete (the 100 litres includes the added FEBSPEED).

Performance Data

Active Base	Calcium Chloride Solution 20-30% active
Chloride ion content:	0.8% w/w cement at addition rate of 2.5ltr per 50kg cement
Specific gravity @ 20°C	1.2
Dosage (as frost proof)	Ambient temperatures down to -4°C: 2.5 litres per 50kg cement Ambient temperatures down to -8°C: 5 litres per 50kg cement

USE	MIX DESIGN	ADDITION RATE/50KG CEMENT	SETTING TIME (APPROX)
Plugging aid	Neat fresh OPC	-	2-3 mins
Concrete	1:2:4	2.5ltrs 5ltrs	7 hours 2.5 hours
Floor screeds	1:3	2.5ltrs 5ltrs	6 hours 2 hours

Febspeed



Wintamix

Frostproofer and Mortar Plasticiser

For Brick and Block Laying. Conforms to BS4887.

- Chloride free
- Improves plasticity and durability of mortar
- Combines mortar acceleration with frost proofing

Colour	Product Code	Pack Size	Box Qty
Clear	FBWINTA5	5L	4
	FBWINTA25	25L	1



Admixtures & Building Chemicals

Wintamix

Product Description

FEB WINTAMIX is chloride free, liquid admixture which combines acceleration with the proven frost protection benefits of air entrainment in mortars and non structural concrete, thus allowing work to continue even at sub-zero temperatures. FEB WINTAMIX has been tested to the requirements of BS 4887 (air entraining properties). BS 5057 Part 1 (accelerating properties) at 5% liquid by weight of cement.

FEB WINTAMIX is designed to be used as mortar admixture throughout the winter period. The air entraining qualities of the product improves the workability of bricklaying mortars. This ensures that the operation can continue to work at optimum rates. FEB WINTAMIX also includes chloride free frost proofing chemicals which accelerate the set during the cold periods.

The user will therefore find it unnecessary to change to a conventional frostproofer.

Features & Benefits

- Increases frost resistance during setting.
- Faster finishing times - even in cold weather.
- Improves workability.
- Easier and faster to spread mortar.
- Remains plastic for longer.
- Promotes higher strength at an early stage.
- Non-corrosive to embedded metals.
- Economical.
- Cuts labour costs, less materials used.
- Less waste.
- Chloride free.
- Does not contribute to efflorescence.
- Reduces bleed or segregation.

Instructions for Use

Mixing

Add FEB WINTAMIX to the gauging water or introduce into the mixing drum at the same time as the water. When mortar is blended by hand it

should be vigorously mixed to achieve maximum plasticity. All sands for mortar shall comply with the relevant British Standard i.e. BS 1200 for Bricklayers Mortars and work should progress in accordance with the methods laid down in the Code of Practice BS 5628 Part 3 for protection and use of mortars at low temperatures and DOE Advisory Leaflet No. 8.

Dosage

Ambient Temperature down to -4°C.

2.5 litres per 50 Kg cement.

Ambient Temperature below -4°C.

5 litres per 50 Kg cement or 7:1 with water.

Storage

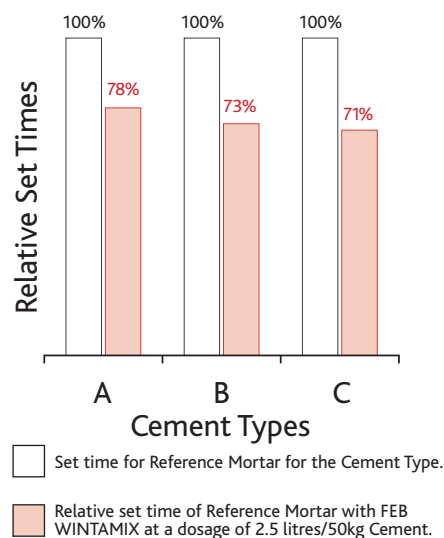
Protect from extremes of temperature. Will freeze but can be reconstituted by stirring after thawing. Stir before use.

Shelf Life

Minimum 12 months if stored in accordance to manufacturer's instructions in unopened containers.

Typical Set Time in Sand/Cement Mortars using cements from different sources.

Test performed in accordance with ASTM C423:1990



Performance Data

Chloride Ion Content

<0.1% (w/w) of admixtures (Nil). Being free of chlorides FEB WINTAMIX does not contravene current Code of Practice for building regulations (BS 5628), unlike traditional products which are based upon potentially corrosive containing chemicals.

Specific gravity @ 20°C

1.2

Specification

Conforms with the air entraining requirements of BS4887 Part 1 "Specification for air entraining (plasticising) mortars" at an addition rate of 2.5 to 5 litres of admix per 50kg cement. Conforms with the requirements of BS5075 Part 1 "Accelerating Grade" at 5% liquid w/w cement.

Typical bond strength to brick

20-25% greater than control after 28 days.



Febtone Powder

Powder Mortar Tone

Colour for Pointing and Bricklaying Mortars

- Permanent colour
- For use with Feb roofing and brick pointing mortars
- Easily controlled dosage

Colour	Product Code	Pack Size	Box Qty
Black	FBTONEBK1	1Kg	6
Brown	FBTONEBN1	1Kg	6
Red	FBTONERD1	1Kg	6
Yellow	FBTONEYW1	1Kg	6



Admixtures & Building Chemicals

Product Description

FEBTONE POWDER is a powder admixture having the prime function of colouring cement mortars and concrete, combined also with an air entraining plasticiser. Available in four colours: Black, Red, Brown and Yellow.

FEBTONE POWDER has been tested, and pigments comply to the requirements of BS 1014.

Typical Uses

- FEBTONE POWDER may be used as a colouring agent in most cementitious mortar and concrete mixes such as pointing, bricklaying mortars, renders, cast screeds and paving.

Features & Benefits

- Contains air entraining plasticisers to aid workability.
- Increased resistance to freeze/thaw cycles.
- Plasticising action ensures even distribution of pigment throughout mix.
- Reduces bleed.
- Lower dosage required when compared to many similar products.

Instructions for Use

Mixing

FEBTONE POWDER having high efficient dispersant properties is easily dispersed throughout the mix when mixed in the normal manner. When gauging by hand, measure out the aggregate and cement and sprinkle FEBTONE POWDER onto dry materials which should then be turned over whilst dry. The water is then added and mixed in the normal manner. Water should be added slowly as the plasticising action of the FEBTONE POWDER will result in a reduced water demand. When mixing by machine: place the aggregates and cement in the mixing drum, add the FEBTONE POWDER and mix dry for at least 30 seconds. Add gauging water and mix as normal.

It should be noted that when wet the coloured mix will appear substantially darker than the final dried mix colour. It is therefore important that the colour is assessed for acceptability in the dry cured state. Variation in sands and aggregates can affect the final colour and therefore care must be taken in the selection of appropriate aggregates to achieve desired colours, i.e. light coloured for pastel shades and darker aggregates for deeper shades. Inconsistency in mix ratios and finishing techniques and curing methods will result in variations in shade. Therefore, the use of batching boxes are desirable where a series of consistent mixes are required.

Curing/After Treatment

Cure using conventional method such as properly secured plastic sheeting, hessian, ponding, etc. or use suitable curing compound e.g. FEBCURE SUPERCLEAR 181.

Coverage

Dosage will vary depending on depth of shade required between 1-2 kilos per 50 kilos cement.

Storage

Store in cool, dry conditions.

Shelf Life

Minimum two years when stored in accordance with the manufacturer's instructions.

Performance Data

Chloride Ion Content	<0.1% w/w of admixture (nil)
Specific gravity @ 20°C	0.9 - 1.5 approx depending on colour
Specification	Conforms to BS1014 (1975) pigments for use with Portland cement
Typical Setting Times	No reduction



Febtone Liquid

Liquid Mortar Tone

Colour for Pointing and Bricklaying Mortars

- Permanent colour
- For use with Feb roofing and brick pointing mortars
- Easily controlled dosage

Colour	Product Code	Pack Size	Box Qty
Black	FBTONEBKLQ2	2.5L	6
Brown	FBTONEBNLQ2	2.5L	6
Red	FBTONERDLQ2	2.5L	6



Admixtures & Building Chemicals

Febtone Liquid

Product Description

FEBTONE LIQUID is a liquid admixture, having the prime function of colouring pointing mortars and is specifically designed for use in small batch mixes. Available in three colours: Black, Brown and Red. FEBTONE LIQUID utilises pigments complying with the requirements of BS 1014.

Typical Uses

FEBTONE LIQUID may be used as a colouring agent in most cementitious pointing mortars including Feb Roofing and Pointing Mortars.

Features & Benefits

- Easily controlled dosage.
- Compatible with Feb roofing and pointing mortars.
- Lower dosage required when compared to many similar products.
- Consistent colour.
- Stable colour.
- Compatible with other cement admixtures.

Instructions for Use

Mixing

Shake container thoroughly before use. FEBTONE LIQUID having high efficient dispersant properties is easily dispersed throughout the mix when mixed in the normal manner. Mortar should be mixed in the normal manner either by hand or mechanical mixer. The FEBTONE LIQUID is added to the mix once the addition of the mixing water has been completed. The mortar should continue to be mixed after the addition of the FEBTONE LIQUID until a uniform colour is achieved. The amount of FEBTONE LIQUID to be added will be dependent upon depth of colour required and may be added up to a maximum as referred to under 'Dosage'. Variation in sands and aggregates can affect the final colour and therefore care must be taken in the selection of appropriate aggregates to achieve desired colours, i.e. light coloured for pastel shades and darker aggregates for deeper shades.

Inconsistency in mix ratios and finishing techniques and curing methods will result in variations in shade. Therefore, accurate batching of the sand and cement is necessary where a series of consistent mixes are required.

Dosage

Dosage of FEBTONE LIQUID may vary dependant on shade and colour desired.

When used in Sand / Cement mortars: Up to 1.25 litres per 25kg bag cement.

When used in Feb Roofing and Pointing Mortars: 250-500ml per 25kg Bag.

Add FEBTONE LIQUID to the gauging water as per the following guide:

Light Shades: Add approx 1ltr of FEBTONE LIQUID to 2 litres of gauging water.

Medium Shades: Add approx 1ltr of FEBTONE LIQUID to 1.5 litres of gauging water.

Darker shades: Add approx 1ltr of FEBTONE LIQUID to 1 litre of gauging water.

Always make a note of the amount of FEBTONE LIQUID used so that subsequent mixes are dosed at the same rate.

Storage

Store sealed bottle in cool conditions.

Shelf Life

Minimum 12 months when stored in accordance with the manufacturer's instructions.

Performance Data

Chloride Ion Content	<0.1% w/w of admixture (nil)
Typical Setting Times	No Reduction
Specific gravity @ 20°C	1.1-1.25 approximately

Brickclean

External Brick Cleaner

Cleaning and Degreasing Solution for Brick, Concrete and Stone Surfaces.

- Acid based formula
- Removes efflorescence and mortar stains

Colour	Product Code	Pack Size	Box Qty
Clear	FBBRICKCL2	2.5L	6
	FBBRICKCL5	5L	4
	FBBRICKCL25	25L	1



Admixtures & Building Chemicals

Product Description

FEB BRICKCLEAN is an acid-based cleaner and degreasing solution for use on brickwork and concrete.

Typical Uses:

- Cleaning of brickwork and floors where efficient cleaning is required.
- Suitable for etching of concrete surfaces as preparation for epoxy resin screeds and toppings etc.

Features & Benefits

- Multi purpose stain remover and degreaser.
- Less hazardous than many traditional 'brick acids'.

Instructions for Use

Preparation of Substrate

Remove any loosely adhering and excess contamination by physical abrasion with wire brush or scraper.

Care must be taken with delicate or soft substrates.

Mixing

To prevent discolouration or damage to substrates it is recommended that the optimum strength of solution be established by applying test areas starting at a 2:1 water/cleaner dilution.

Application

Areas of severe contamination may require more than one treatment using neat FEB BRICKCLEAN. The product should be applied by brush using a scrubbing action. Rinse off with plenty of water before drying out occurs. Where etching of concrete is required prior to application of epoxies, use undiluted, scrub well in with a stiff bristle brush, allow about 20 minutes to act (less in hot weather) and then liberally hose down to completely wash away all the solution. Allow to dry out prior to application of the epoxy.

Coverage

Up to 10m² per litre, dependent upon porosity or contamination of substrate.

Storage

Do not store above waist height. Store where children cannot gain access.

Shelf Life

Up to 24 months if stored at ambient temperatures in unopened containers.

Performance Data

Composition	FEB BRICKCLEAN is an acid solution modified with active detergents.
Colour	Clear transparent liquid with similar viscosity to water
Active Acid Content	< 10% w/w



Febstrike

Solvent Based Chemical Release Agent

- Concrete shuttering release agent
- Enables quick release of shuttering and clean well formed edges

Colour	Product Code	Pack Size	Box Qty
Amber/ Light Brown	FBSTRIKE5	5L	4
	FBSTRIKE25	25L	1



Admixtures & Building Chemicals

Febstrike

Product Description

FEBSTRIKE is a chemical release agent suitable for mould and shutter faces prior to casting concrete in order to achieve a clean release after removal of the formwork. The resultant concrete has a smooth hard uniform finish, with reduced incidence of blow holes. FEBSTRIKE can be applied to the formwork by spray in the form of a light uniform mist coating.

Typical Uses

FEBSTRIKE is formulated for application to plywood, timber, steel and plastic faced formwork and moulds, prior to casting concrete, to ensure a clean release.

Features & Benefits

- Facilitates easy removal of shuttering.
- Leaves clean faces.
- Reduces surface imperfections.

Instructions for Use

Application

Apply before the first casting and thereafter re-apply immediately after stripping and cleaning the mould. Lightweight horticultural sprayers are ideal as FEBSTRIKE is finely atomised to give a uniform coating. Excessive application should be avoided. If after application, the FEBSTRIKE is completely absorbed into new timber or plywood, a further application should be made before filling the moulds or formwork.

Coverage

The coverage rate for FEBSTRIKE is 30 to 60m²/litre when spray applied depending on smoothness and porosity of the formwork used.

Note: Progressively better results are obtained on plywood and timber moulds as they become impregnated and the operatives become accustomed to working with the release agent. FEBSTRIKE in general, may be used over timber moulds, etc., which have been treated with other mould oils, providing excess has been removed.

Storage

Store in manufacturer's sealed drums at ambient temperatures.

Shelf Life

2 years when stored in accordance with manufacturer's instructions.

Performance Data

Composition	Low viscosity hydrocarbon carrier, blended with a chemically active release agent
Colour	Amber/ Light brown
Specific Gravity @ 20°C	0.811
Freezing Point	-15°C
Flash Point	51°C (flammable)
Saponification number	10.8
Viscosity	2.5Cst
Cleaning	FEBSTRIKE may usually be left in spray guns or sprayers without detriment, but with certain types, there may be some softening of rubber seals with prolonged contact



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Bonding Agents



Febond PVA - The Original

Professional PVA

Multi Purpose PVA Adhesive, Bonding Agent and Admixture. Conforms to BS5270.

- Primer and sealer for concrete and plaster
- Building and decorating adhesive
- Numerous applications in the building industry

Colour	Product Code	Pack Size	Box Qty
White	FBBOND PVA1	1LTR	12
	FBBOND PVA2	2.5LTR	6
	FBBOND PVA5	5LTR	4
	FBBOND PVA25	25LTR	1



Bonding Agents

Febond PVA - The Original

Product Description

FEBOND PVA is an economical quick drying adhesive, sealer and bonding agent and cement admixture which has many applications. FEBOND PVA conforms to the requirements of BS 5270.

Typical Uses

- As an adhesive for most common building materials - FEBOND PVA will bond most common building materials - except PVC, rubber and polythene – to themselves and to each other.
- As a bonding agent for cement screeds and render, plaster and concrete - FEBOND PVA will bond cement screeds, rendering and plaster to most sound surfaces such as concrete, stone and brick and new concrete to old without the need for hacking the surface to form a key.
- As an admixture for mortar / in cements/ sand and granolithic screeds: FEBOND PVA enables thin, jointless floor toppings to be laid.
- As a sealing coat - Applied to porous concrete renders, plaster, plasterboards and granolithic floors as a sealer, FEBOND PVA minimises dusting.

Features & Benefits

- Numerous applications in the building industry from one product.
- Economical and simple to use.
- Exceptional adhesive properties.
- Dries clear.

Instructions for Use

As an adhesive:

On smooth, flat surfaces, coat both faces with FEBOND PVA diluted with an equal volume of water. Allow to become tacky then press together. When bonding smooth wood to wood, apply a thin coat of neat FEBOND PVA to one face only and press together firmly. On large areas, such as laminated plastic, clamping or weights may be required until the bond is set (usually after 24 hours, depending upon surface porosity).

Dilution Rate

As a sealer coat: 1 part FEBOND PVA to 4 parts water.
As a bonding coat: dilute 3 parts FEBOND PVA to 1 part water and apply after application of a 1: 4 sealer coat.

Note: Allow the sealer coat to dry prior to the application of the bonding coat. On totally non-absorbent surfaces, such as polished grano, etc. the sealer coat may be omitted.

If surfaces to be bonded are very porous, first prime with 1 part FEBOND PVA diluted with 3 parts clean water and allow to dry.

As a bonding agent for cement screed and renderings, plaster etc.

The background must be sound since the adhesion of the mortar to the floor, wall or ceiling will only be as good as the surface beneath. Carefully examine the surface and remove all flaking and cracking plaster etc. The surface must be stable and sound, thoroughly clean, and free from oil and grease. Seal the surface using FEBOND PVA (1:4 dilution). Allow this to dry, then apply a bonding coat of 3 parts FEBOND PVA diluted with 1 part water. Screed, plaster or render on the tacky bonding coat using established sound practice (when using proprietary premixed plasters consult plaster manufacturer's recommendations regarding the correct grade to use). Cure cementitious screeds and renders properly.

Bonding New Concrete to old

Ensure that the substrate is stable, sound, thoroughly clean and free from oil, grease and any loosely

adhering material. Apply a sealing coat of FEBOND PVA diluted with 3 to 5 parts of clean water and allow to dry. Apply a bonding coat of 3 parts FEBOND PVA diluted with 1 part volume of water and lay the new concrete while this coat is still tacky. To ensure maximum bond strength, add 1.25 to 2.5 litres of FEBOND PVA per 50Kg bag of cement.

As a surface sealing coat

To seal highly porous and badly dusting concrete or granolithic subfloors, apply 2 coats of FEBOND PVA diluted at the rate of 1 part FEBOND PVA to 4 parts water and a final coat diluted 1 part FEBOND PVA to 3 parts water. Allow each coat to dry before proceeding. On less porous floors, the first coat may be omitted.

Refer to the Technical Datasheets for detailed instructions on applying first and second coats.

Coverage

As a primer/adhesive

Neat 1 litre per 6-12 sq mtrs.

Diluted 1:4: 1 litre per 24-48 sq mtrs.

Diluted 1:3: 1 litre per 18-36 sq mtrs.

As an admixture:

FEBOND PVA is added at the rate of 10 to 15 litres per 50Kg of cement used i.e., approx. 100 to 150 litres per cubic metre of mortar.

Storage

Store at ambient temperatures - protect from frost.

Shelf Life

Up to 12 months if stored in unopened containers according to manufacturer's instructions.

Performance Data

Viscosity @ 23°C Bookfield RVT 5/20	120 – 200 poise
pH	4.5 - 5.5
Minimum Film Forming Temperature (°C)	Approx 2
High Temperature Stability (1 week @ 50°C)	Stable
Specific Gravity @ 20°C	1.07

General Purpose PVA

Multi Surface Adhesive, Primer, Sealer and Admixture

- Bonds a wide variety of building materials including wood, plaster, concrete and ceramics

Colour	Product Code	Pack Size	Box Qty
White	FBGPPVA5	5KG	4
	FBGPPVA25	25KG	1



Bonding Agents

Product Description

FEB GENERAL PURPOSE PVA is an economical quick drying adhesive, sealer and bonding agent and cement admixture which has many applications.

Typical Uses

- FEB GENERAL PURPOSE PVA will bond most common building materials - except PVC, rubber and polythene - to themselves and to each other.
- As a bonding agent for cement screeds and render, plaster and concrete.
- As an admixture for mortar and an admixture in cements/sand and granolithic screeds.
- As a sealing coat - FEB GENERAL PURPOSE PVA minimises dusting.

Features & Benefits

- Numerous applications in the building industry from one product.
- Economical and simple to use/exceptional adhesive properties/quick drying.

Instructions for Use

As an adhesive

On smooth, flat surfaces, coat both faces with FEB GENERAL PURPOSE PVA diluted with an equal volume of water. Allow to become tacky then press together. When bonding smooth wood to wood, apply a thin coat of neat FEB GENERAL PURPOSE PVA to one face only and press together firmly. On large areas, such as laminated plastic, clamping or weights may be required until the bond is set (usually after 24 hours, depending upon surface porosity).

Dilution Rate

As a sealer coat: 1 part FEB GENERAL PURPOSE PVA to 4 parts water. As a bonding coat: Use neat and apply after application of a 1:4 sealer coat.

Note: Allow the sealer coat to dry prior to the application of the bonding coat. On totally non-absorbent surfaces, such as polished grano, etc. the sealer coat may be omitted.

If surfaces to be bonded are very porous, first prime with 1 part FEB GENERAL PURPOSE PVA diluted with 3 parts clean water and allow to dry.

As a bonding agent for cement screed and renderings, plaster etc: The background must be sound. Remove all flaking and cracking plaster etc. The surface must be clean, and free from oil and grease. Seal the surface using FEB GENERAL PURPOSE PVA (1:4 dilution). Allow this to dry, then apply a neat bonding coat of FEB GENERAL PURPOSE PVA. Screed, plaster or render on the tacky bonding coat using established sound practice.

Bonding New Concrete to old: Apply a sealing coat of FEB GENERAL PURPOSE PVA diluted with 4 parts of clean water and allow to dry. Apply a bonding coat of neat FEB GENERAL PURPOSE PVA and lay the new concrete while this coat is still tacky. To ensure maximum bond strength, add approx 2 litre of FEB GENERAL PURPOSE PVA per 50Kg bag of cement.

As a surface sealing coat: Apply 2 coats of FEB GENERAL PURPOSE PVA diluted at the rate of 1 part FEB GENERAL PURPOSE PVA to 4 parts water and a final coat diluted 1 part FEB GENERAL PURPOSE PVA to 3 parts water. Allow each coat to dry before proceeding. On less porous floors, the first coat may be omitted.

As an admixture in cement/sand and granolithic screeds: The use of FEB GENERAL PURPOSE PVA in the mix allows thin, jointless floor screeds (9-18mm thick) to be laid without the need for setting out bays, new levels, etc. For domestic use and other areas subject to light traffic, use

3 parts sand, 1 part cement and 10 litres of FEB GENERAL PURPOSE PVA per 50Kg of cement. For an industrial floor finish or where there is heavy traffic, use 1 part sand, 1 part cement and 2 parts 6 to 3mm granite (no dust) plus 10 to 15 litres of FEB GENERAL PURPOSE PVA per 50Kg of cement.

Follow the instructions given above for preparation, sealing and bonding. Lay the screed on to the tacky bonding coat, tamping well to ensure maximum contact with the floor beneath. Trowel to smooth finish. Setting time is normally 36 hours to 48 hours. Allow 3 to 7 days before opening to traffic, depending upon the severity of the traffic (longer may be required in cold temps).

Coverage

As a primer/adhesive:

Neat 1 litre per 6-12 sq mtrs.
Diluted 1:4: 1 litre per 24-48 sq mtrs.
Diluted 1:3: 1 litre per 18-36 sq mtrs.

The above figures will vary according to the degree of porosity and texture of the surface to which FEB GENERAL PURPOSE PVA is applied.

As an admixture: FEB GENERAL PURPOSE PVA is added at the rate of 10 to 15 litres per 50Kg of cement used i.e. approx. 100 to 150 litres per cubic metre of mortar.

Storage

Store at ambient temperatures - protect from frost.

Shelf Life

Up to 12 months if stored in unopened containers according to manufacturer's instructions.

Performance Data

Viscosity @ 23°C Brookfield RVT 5/20	120-200 poise
pH	4.5-5.5
Minimum Film Forming Temperature (°C)	Approx 2
High Temperature Stability (1 week @ 50°C)	Stable
Specific Gravity @ 20°C	1.03
Cleaning	Clean all equipment in water immediately after use.

General Purpose PVA

Febond SBR

Waterproofer & Bonding Admixture

Polymer improver for cement.

- Concrete repair
- Floor screeds & toppings
- Waterproofing & tanking

Colour	Product Code	Pack Size	Box Qty
White	FBBONDSBR5	5LTR	4
	FBBONDSBR25	25LTR	1
	FBBONDSBR205	205LTR	1



Bonding Agents

Febond SBR

Product Description

FEBOND SBR is a styrene-butadiene co-polymer latex specifically designed for use with cementitious mixes and as a reliable water resistant bonding agent.

Typical Uses

- Concrete repair/floor screeds and toppings/ external rendering.
- Waterproofing and tanking and Fixing brick slips and tiles.
- Corrosion protection of steel and silage pit lining and protection.

Features & Benefits

FEBOND SBR modified cement based mixes have the following advantages:

- Greatly increased flexural and tensile strength. Gives greatly reduced shrinkage.
- Prevents bleeding and lower water-cement ratio.
- Increased durability and toughness, improved abrasion resistance. Good frost, abrasion resistance and resistance to water-borne salt penetration.
- Resistant to many chemicals and to mineral oils.
- Excellent adhesion to steel and concrete. Sticks well to brick, glass, asphalt, wood, expanded polystyrene etc

Instructions for Use

Preparation of Substrate

All surfaces must be clean and sound. When repairing spalled or damaged concrete, ensure that the concrete has been cut back to thoroughly sound material. Always lay to a minimum 6mm deep saw cut edge, depending upon application. Avoid 'feather edging'.

Bonding Slurry

Dampen surfaces. Prepare a bonding slurry of approximately 1.5 parts of OPC to 1 part of FEBOND SBR by volume. Apply by stiff brush scrubbing well into the surface, taking care to ensure complete coverage. Do not exceed an average thickness of 0.3 to 0.5mm and thickness

per coat. If a second coat is necessary it should be applied at right angles to the first. Never apply more than can be comfortably over-screeded/ rendered within 15 minutes.

Mixing

Premix dry sand and cement for about one minute. Pour the desired quantity of FEBOND SBR and mix for about 30 seconds only, to minimise air entrainment. Slowly add water, whilst still mixing, until required consistency is obtained. The total mixing time after adding the FEBOND SBR should not exceed two minutes.

Application - Rendering to vertical surfaces

Apply the bonding as above and allow to tack up. Renders should not exceed 6mm depth per coat (slump risk). However, several coats can be applied in fairly rapid succession, usually within 15 to 30 minutes. Finish using a wooden float or steel trowel. Alternatively, scratch the first coat of render after application and allow to dry overnight before applying the second coat. This technique is preferred for rendering where the drying rate is low but not recommended when waterproofing.

Screeds and toppings, applied to horizontal surfaces

Suitable for any thickness from 40mm down to

6mm minimum. After mixing, the FEBOND SBR modified mix should be placed over the still wet bonding slurry, well compacted and struck off to level. Trowel to required finish using a wooden float or steel trowel.

Curing/After Treatment

Moisture cure for at least one day and then allow to dry out slowly. The latex mortar must then be allowed to dry out to permit the latex particles to join together to form continuous films and strands.

Coverage

As a bonding coat: 1ltr of FEBOND SBR (slurried) per 3 m² of substrate

Admixture: 10-15ltrs of FEBOND SBR per 50kg cement

Storage

Stir before use. Protect from frost, FEBOND SBR may be permanently damaged by freezing, particularly if thawed quickly.

Shelf Life

Up to one year when stored under normal conditions and temperatures (5°C - 20°C).

Technical Data/Typical Properties

Typical properties of a FEBOND SBR modified cement and sand mix are given below.

Performance Data

Compression strength	45 to 50N/mm ² †
Tensile strength	Up to 6.5N/mm ² †
Flexural strength	Up to 13N/mm ² †
Freeze thaw resistance	Excellent
Water vapour permeability	Less than 4g/m ² / 24 hour through an 11mm thick test piece*
Chemical resistance	Resists mild acids, alkalis, sulphates, chlorides, urine, dung, lactic acid, sugar.
Resistance to water pressure	- 30m head Excellent - no water penetration through a 15mm thick test piece*

Unless otherwise stated, these are based on a '3 parts sand to 1 part cement by weight' mix in which 10 litres of FEBOND SBR per 50kg of OPC have been incorporated. † Indicated results are typical. Variations in cement used and workability can cause differences. * FEBOND SBR added at 15 litres/50kg cement used

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Concrete Repair & Speciality Mortars





Febpatch 45

Rapid High Strength Repair Mortar

- Specially formulated repair mortar, based on magnesia-phosphate cement
- Pre-mixed with selected aggregates
- Provides controlled, extremely high early strengths
- Trafficable within 45 minutes
- Ready to use, mix with water
- High bond strength, no primers required

Colour	Product Code	Pack Size	Box Qty
Grey	FBPATCH45	25KG	1



Concrete Repair & Speciality Mortars

Febpatch 45

Product Description

FEBPATCH 45 is a specially formulated repair mortar, based on magnesia-phosphate cement pre-mixed with selected aggregates, which gives controlled, extremely high early strengths in temperatures ranging from -20°C (or lower) up to over 30°C

Typical Uses

- For use in concrete repair situation where the minimum delay and work disruption is of the utmost importance.
- Cold store floor areas/Roads and nosing's/Bridge decks/Quays/Crane rails/Industrial floor areas, loading bays and warehouses/Around fixing bolts.
- Raising and levelling manhole covers, gratings, hydrants etc.

Features & Benefits

- High strength at a very early age (45 minutes).
- Minimum delay to traffic and production. When used to repair concrete pavings, it permits early re-opening to traffic - within 45 minutes at 20°C.
- Ready for use. Only requires the addition of water (see Mixing).
- High bond strength and no secondary bonding agents required.
- Highly durable. Excellent resistance to de-icing salts - High freeze/thaw resistance: No curing required.
- Can be placed in sub-zero temperatures.

Instructions for use

Surface Preparation

All surfaces should be thoroughly sound and uncontaminated by dirt, oil or grease. The minimum thickness of repair should not be less than 20mm. The boundaries of the repair must be square cut. Under no circumstances should "feather edging" be used.

Priming

Although secondary bonding agents are not required, the area to be repaired must be thoroughly pre-wetted with clean water. Care should be taken, however, to ensure that all standing water is removed.

Mix Proportions:

Mortar mix (standard): FEBPATCH 45 25 kg;
Water 1.5 litres

Concrete mix (large areas > 150mm deep):
Coarse 10 kg Aggregate (max) Water 1.5 litres
FEBPATCH 45 25 kg

Small Batches: 60ml Water per 1kg FEBPATCH 45

Mixing

The following sequence must be followed at all times when mixing FEBPATCH 45:

1. A suitable mixer (i.e. tilting drum) should be located as near as possible to the area of work.
2. The amount to be mixed should never exceed that which can be transported, placed, compacted and finished within ten minutes.
3. Wet down the mixer and drain off the free water.
4. Pour the correcting measured amount of clean water into the mixer first. Do not add the water to FEBPATCH 45.

5. When adding coarse aggregates, these must be added to the water before the addition of FEBPATCH 45 into the mixer.

6. Empty the full contents of the FEBPATCH 45 bag into the mixer. Minimum mixing time is 1 minute.

Refer to the Technical Datasheets for detailed instructions on applying first and second coats.

Coverage

25kg of FEBPATCH 45 will yield approximately 11.6ltrs. Where coarse aggregates are added at the rate of 10kg per 25kg FEBPATCH 45, an approximate increase in yield of 30% will be achieved.

Storage

Store in cool, dry conditions.

Shelf Life

12 months minimum when stored in accordance with the manufacturer's instructions.

Performance Data

Thickness (min and max)	20mm-150mm – for greater than 150mm in depth, a 10mm single sized coarse aggregate (to BS882) may be added up to 10kg per 25kg of FEBPATCH 45
Workability @ 20°C	approx 5-12 minutes
Setting time (initial)	15 minutes at 20°C/35 minutes @ 8°C
Final set @ 20°C (trafficable)	approx 45 minutes
Application temperatures	-30°C to +30°C
Yield per 25kg (mixed as directed)	Approximately 11.6ltrs when mixed as directed. Addition of 10kg coarse aggregate/25kg FEBPATCH 45 will increase yield by approximately 30%
Density (wet)	2200kg/m ³
Shrinkage	Zero (shrinkage compensated grade)

Typical strengths (BS1881) @ 20°C (100mm cubes):

TIME AFTER PLACEMENT	COMPRESSIVE STRENGTH (N/mm ²)	TENSILE STRENGTH (N/mm ²)
1 hour	22	3
3 hours	33	2.5
24 hours	44	3
28 days	53	3.5



Febpatch 90

Concrete Floor Rapid Repair Mortar

- Open to traffic within 90 minutes
- Minimises disruption in traffic and work areas
- Excellent adhesion
- Freeze-thaw and icing salts resistant

Colour	Product Code	Pack Size	Box Qty
Grey	FBPATCH90	25KG	1



Concrete Repair & Speciality Mortars

Product Description

FEBPATCH 90 is a structural strength fast setting/ high early strength bedding and general repair mortar, which is trafficable after only 90 minutes at 15°C to 20°C.

Typical Uses

- For use in any situation where the minimum of delay and work disruption is of utmost importance.
- Patching floors or roads.
- Repair of factory or workshop floors.
- Repair to concrete, including marine environments.
- Bedding or re-levelling manhole frames, road furniture, kerbs, gratings and hydrants.
- Setting posts or balustrades.

Features & Benefits

The advantages over conventional repair materials are:

- Simple and easy to use for many types of repairs.
- Saves time and labour.
- High early strength.
- When used to repair concrete pavings, FEBPATCH 90 will start to harden in 10 to 15 minutes and usually permits re-opening to traffic only 90 minutes after laying at 15°C to 20°C.
- Pre-blended, ready-to-use. Only requires the addition of water.
- Excellent adhesion to most building surfaces.
- Highly durable. Excellent resistance to de-icing salts.
- More economic and simpler to use than epoxies or polyesters.

Instructions for Use

Preparation of Substrate

It is essential the surface of the concrete substrate to which the FEBPATCH 90 is to be applied should be thoroughly sound and uncontaminated by dirt, oil or grease. Preparation should expose a sound, reasonably level, lightly textured surface, which

must then be cleaned. Recommended methods of preparation are scabbling; bush hammering or grit blasting.

The minimum thickness of repairs normally should not be less than 10 mm, maximum 75 mm. The boundaries of the repair must be saw cut. Under no circumstances should "feather edging" be used. It is also essential the minimum thickness be measured from the "peaks" and not the "troughs" of any scabbled concrete. Where reinforcement is exposed, all scale should be removed and the bar thoroughly cleaned by wire brushing or sand blasting.

Mixing:

Mix by hand or machine in the ratio of 25kg powder to 3 litres of water to achieve a stiff slump free mortar. DO NOT USE EXCESS WATER AS THIS WILL CONSIDERABLY REDUCE STRENGTH. Minimum mixing time is 1½ minutes.

Application

Apply material by trowel to pre-wetted area within 4 minutes of mixing and push well into position

using a float. Suitable for repairs from 75mm down to 10mm in one application. Deeper applications may be achieved by applying further layers once initial layer is set, or by bulking out this product with up to 30% hard stone clean aggregate (NOTE: this will slow down strength gain).

Clean tools and equipment with water immediately after use.

Coverage

25 Kg of FEBPATCH 90, combined with the correct amount of clean drinking water will yield approximately 0.0125 m² (12.5 litres) and finishing (approximately 50kg/m² @25mm depth).

Storage

Store in cool, dry conditions.

Shelf Life

6 months from date of manufacture when unopened and stored in accordance with the manufacturer's instructions.

Performance Data

Thickness (min and max)	10mm-75mm	
Workability @ 20°C	approx 5-12 minutes	
Setting time (initial) @ 20°C	approx 15 minutes	
Final set @ 20°C (trafficable)	approx 90 minutes	
Minimum application temperature	+5°C	
Yield per 25kg (mixed as directed)	approx 12.5ltrs	
Density (wet)	2200kg/m ³	
Shrinkage	Minimal (shrinkage compensated grade)	

Typical strengths (BS1881) @ 20°C:

TIME AFTER PLACEMENT	COMPRESSIVE STRENGTH (N/mm ²)	TENSILE STRENGTH (N/mm ²)
1 hour	12	-
2 hours	21	-
24 hours	28	1.82
7 days	-	2.46
28 days	>50	3.51

Febpatch 90



Roofing Mortar

Pre-blended Mortar for Setting Roof Ridge Tiles

- Also suitable for general pointing
- Contains insoluble hydrophobic agents for permanent water repellency
- Good adhesion
- Suitable for horizontal, vertical or inclined application
- Can be pigmented on-site
- Resistant to cracking, crazing and frost damage

Colour	Product Code	Pack Size	Box Qty
Grey	FBROOFMOR	20KG	1



Concrete Repair & Speciality Mortars

Roofing Mortar

Product Description

FEB ROOFING MORTAR is a water repellent, thixotropic mortar, with improved wetting and adhesion properties.

FEB ROOFING MORTAR contains an insoluble hydrophobic ingredient and is therefore permanently water repellent. FEB ROOFING MORTAR also contains an air-entraining plasticiser that gives good workability, high early strength and good frost resistance.

Typical uses

- To permanently fix ridge tiles.
- For general pointing and finishing of tiled roofs.
- With pre-cast concrete and reconstructed stone tiles and roofing elements.

Features & Benefits

- Provides permanent water repellency.
- Good adhesion between tiles and/or hard building materials.
- Good strength development. Excellent workability, suitable for horizontal, vertical or inclined application.
- Reduced shrinkage.
- Resistant to cracking, crazing and frost damage.
- Mortar joints stay cleaner longer and have greater resistance to attack from atmospheric acids.
- Factory blended for consistency and reliability.

Instructions for Use

Mixing

Always add powder to water. Mix by hand or machine in the ratio of 20kg powder to 2.4 to 2.7litres of water to achieve an even slump free mortar. Mix for 3-5 minutes then allow to stand for 5 minutes before using. **DO NOT USE EXCESS WATER AS THIS WILL CONSIDERABLY REDUCE STRENGTH.** A lower water content would be more suitable for the bedding of ridge tiles.

FEB ROOFING MORTAR can be mixed by hand, but use of an appropriate mixer is recommended for best consistency and performance. FEB ROOFING MORTAR should be placed in accordance with good construction practice and relevant codes of practice. Good compaction is required in all cases.

Coverage

1 x 20kg bag when mixed with 2.7litrs of water will yield 11.6litrs of wet mortar.

Storage

Store in cool, dry conditions.

Shelf Life

9 months from date of manufacture when stored as directed.

Performance Data

Density (powder)	1.95g/cm ³
Yield	1 x 20kg bag when mixed with 2.7litrs of water will yield 11.6litrs of wet mortar
Chloride content	<0.1% w/w (nil)
Estimation (grouting)	Litres of material required (mixed) = $\frac{\text{width (mm)} \times \text{depth (mm)} \times \text{length (m)}}{1000}$
Density (wet)	1550kg/m ³
Shrinkage	Minimal (shrinkage compensated grade)
Tensile strength (typical)	>3.5N/mm ² after 28 days
Tensile adhesion	>0.6N/mm ² after 28 days
Flexural strength	>10N/mm ² after 28 days
Compressive strength	>25N/mm ² after 28 days



Febgrout Universal

High Precision Flowable Grout

- To fill gaps in concrete from 10mm to 100mm
- Chloride free – non corrosive, shrinkage compensated
- For bridge bearings, stanchion base plates & machine bedding

Colour	Product Code	Pack Size	Box Qty
Grey	FBGROUT25	25KG	1



Concrete Repair & Speciality Mortars

Product Description

FBGROUT UNIVERSAL is a ready to use, non-shrink construction grout. It can be used as fluid or plastic consistencies for grouting of equipment and machinery, bearing pads, rails and anchoring.

Typical uses

FBGROUT UNIVERSAL is recommended for:

- Grouting bearing pads and plinths/Grouting under machinery base plates, stanchion bases and crane rails.
- Anchoring bolts, reinforcing bars and rods/Underpinning.

Features & Benefits

- Non shrink for effective contact and support with high early strength for rapid installation and use of plant.
- Durable, uniform dense structure with good workability into gap widths of down to 5mm for up to 1 hour at 20°C.

Instructions for Use

Surface Preparation

All surfaces must be clean and sound. Remove all surface laitance. Wet surfaces 6 – 24 hours before starting and keep in a moist condition during placing.

Mixing

Air entrainment should be avoided. Add the correct amount of water for the required consistency to the mixer and then add the complete pack(s) slowly while mixing. Mix for a further 3 – 4 minutes until smooth and cohesive. Allow to stand for 1 minute before use. Re-mix and use immediately.

Strength Development: The strength of the grout is dependent on the amount of mixing water, temperature of the object grouted, curing and age of hardened grout.

Application

Under plates: Ensure sufficient material is available to complete the work and obtain a continuous fill. Pour from one side only to avoid air entrapment, keeping a head on the grout to promote flow.

DO NOT vibrate but rods, straps and chains can be used to aid complete filling. A high gravity feed may also be used.

Grouting large volumes: FBGROUT UNIVERSAL may be used up to 75mm thick sections. Above this the addition of clean, graded 10mm aggregates at up to one to one by weight is recommended. In this instance normal concrete mixers and pumps may be used.

Pumping: FBGROUT UNIVERSAL may be placed using piston, ram or diaphragm type grout pumps fitted with ball valves. In all cases, ensure maximum restraint is maintained; otherwise compressive strength will be reduced.

Placing

Restrained areas: FBGROUT UNIVERSAL should be placed in the flowable state utilising straight pouring or pumping techniques to place a bedding mortar under bearing plates. Note that unrestrained areas around baseplates should always be kept to a minimum (<150mm).

Unrestrained areas: Even with good curing, unrestrained areas of grout, for example around baseplates, may exhibit drying shrinkage cracking some time after placement. This is not detrimental

to the performance of the grout where it is restrained under the plate or bearing, but may affect the cosmetic appearance of the application.

Curing

Good curing is essential. Immediately after finishing apply 1 coat of FEBCURE SUPERCLEAR 181 to all exposed surfaces. Alternative methods are water ponding, mist spraying etc but in all cases these must be maintained for at least 7 days. Keep the grout above 5°C at all times during application and cure.

Coverage

25Kg of FBGROUT UNIVERSAL mixed with 4.5 litres of water produces approximately 13.4 litres (0.0134 m³) of grout. (Approximately 75 x 25Kg bags per m³), using more or less water to meet consistency requirements, will increase or decrease the yield accordingly

Storage

Store in cool dry conditions away from direct sunlight and at ambient temperatures.

Shelf Life

6 months from date of manufacture when stored as directed.

Performance Data

Specification	
Complies to specification for "Highway Works" Clause 2601 (DOT)	
Joint Depth	5mm minimum, 75mm maximum
Workability @ 20°C	approx 2 hours
Setting time (initial) @ 20°C	approx 8 hours
Final set @ 20°C (trafficable)	approx 12 hours
Minimum application temp	+1°C (when mixed as directed above)
Density (wet)	2160kg/m ³
Expansion characteristics (ASTM C87)	0.35%-1.1% (unrestrained)
Chloride ion content (BS1881 Part 124)	<0.002% w/w
Cement content (BS4551)	44.3% w/w

Febgrout Universal



Febox NF

Epoxy Adhesive & Bedding Compound

Fast curing Epoxy Adhesive blended with fine aggregate for bedding, gap filling and repairs to concrete, brick, stone and steel.

- Non-slump, non-shrink
- High strength, impact resistant
- Resistant to chemicals & solvents

Colour	Product Code	Pack Size	Box Qty
Pale Grey	FBBOXNF3	3KG	1
	FBBOXNF10	10KG	1



Concrete Repair & Speciality Mortars

Febox NF

Product Description

FEBOX NF is an epoxy resin bedding compound, which has been designed for use where a non slumping type of epoxy bedding compound is required. It is a two pack, fine aggregate filled, fast curing material, ideal for a variety of bedding, gap filling and concrete repair applications. FEBOX NF is a stiff but easily workable compound that can be applied by either trowel, spatula or knife. It cures to give high mechanical properties typical of epoxy compounds. It is resistant to oils, greases, petroleum, salts, many acids and alkalis and most commonly met corrosive media. It does not shrink on curing, and is designed to be used when cured from 5°C to 60°C. Its impact resistance, and mechanical strength is significantly greater than that of concrete.

Typical Uses

- For surface repairs of fine cracks and spalls.
- For gap filling, grouting, bedding fixtures etc.
- For repairs to arrises and edge pieces without the use of formwork.
- Wherever a thixotropic epoxy mortar is required.
- Repairing vertical honeycomb concrete in abutments or overhead repairs on soffits.
- Fixing slip bricks to concrete.
- Securing bolts into walls.
- As a gap filling adhesive.
- Filling bolt pockets.
- Bedding tiles.
- Repairing concrete posts in situ.

Features & Benefits

- High strength.
- Non-slump.
- Strong adhesion.
- Chemical resistant.
- Impact resistant.
- Non shrink.
- Epoxy based.

- Trowels to a smooth finish.
- Easy to use.
- Supplied in pre-weighed units.
- No bonding or primer required.

Instructions for Use

Preparation of Substrate

All loose particles, laitance, dust and grease etc. must be removed prior to application of FEBOX NF.

Mixing

The 3Kg pack has been designed to be readily mixable by trowel. Where more than one pack or a larger pack is to be mixed, this would require machine mixing. A mixall portable mixer (HD5 model) is suitable for this.

Application

Knife or trowel FEBOX NF to the required level using the minimum of solvent on the trowel to aid workability. The finished surface may be finished smooth by use of a paint brush dipped in Xylene. Where a very deep recess is to be filled, it may be necessary to build up in layers.

Coverage

3kg is sufficient to cover 1.1m² at 1.5mm thickness.

Storage

Store in unopened containers in cool, dry conditions at ambient temperatures between 5 - 35°C (ideally 15-20°C).

Shelf Life

2 years if stored in accordance with manufacturer's instructions.

Performance Data

Composition	Two-component epoxy based mortar filled with selected fine aggregates
Specific gravity @ 20°C	1.80
Flashpoint	200°C
Compressive strength @ 7 days	50N/mm ²
Tensile strength @ 7 days	6.5N/mm ²
Flexural strength @ 7 days	50N/mm ²
Full cure 25°C	3 to 5 days
Bond strength	Greater than that of concrete
Pot life @ 25°C / @ 40°C	1 hour / 30 mins
Cure rates @ 25°C / @ 40°C	5 hours / 2 hours
Full cure @ 25°C / @ 40°C	5 days / 3 days
Application Temperature	+5 to +40°C
Chemical resistance	FEBOX NF has resistance to the following: most aqueous systems, raw sewage, urine, fresh water, sea water, diluted and concentrated alkalis, diluted acids, mineral, vegetable and animal fats and ammonia.



Febox MP

Heavy Duty Epoxy Mortar Kit

High Impact Epoxy Patching Mortar for repairs to concrete, stone, screeds, brick & steel.

- For overnight repairs
- High abrasion resistance
- Trowels to a feather edge
- High chemical and solvent resistance

Colour	Product Code	Pack Size	Box Qty
Grey	FBBOXMP2	2KG	1
	FBBOXMP5	5KG	1



Concrete Repair & Speciality Mortars

Product Description

FEBOX MP is a general purpose two-part epoxy patching mortar which can affect 24 hour (overnight) repairs to concrete. Strengths in excess of those of 28 day old concrete can be gained within 24 hours. Mainly intended for horizontal surfaces. FEBOX MP bonds tenaciously to concrete, masonry and non-vibrating steel, allowing a hard durable repair to be made without delay.

Typical Uses

- Repairing concrete floors.
- Filling cracks in concrete and masonry.
- Repairing damaged concrete pipes and kerbs.
- As a high strength structural gap filler.
- Repairing broken edges on steps.
- Levelling worn floors taking constant traffic.
- Repairing spalled roads and runways.
- Repairing and joining pre-cast concrete.
- Covering concrete or bedding tiles subject to corrosive conditions.

Features & Benefits

- High abrasive resistance.
- High chemical and solvent resistance.
- Excellent adhesion to all sound surfaces.
- Bonds to clean, non-vibrating steel.
- Can be used indoors or outdoors.
- Greater 28 day strength than concrete.
- Can be trowelled to a feather edge.
- Trowels to a smooth finish.

Instructions for Use

Preparation of substrate

The substrate must be of sound quality and of adequate strength to receive the FEBOX MP. Concrete substrates must be free from dirt, grease, oil, fats or any other contaminant. To ensure a sound surface, all laitance should be removed by mechanical preparation or grit blasting. Remove

dust and thoroughly clean off. New concrete should be at least 28 days old. Metal - all rust, oil and grease etc. must be removed to leave the metal thoroughly clean and unoxidised.

Mixing

Each pack contains the correct proportions of base and reactor - no attempt should be made to mix only a portion of the pack.

Single packs can be thoroughly mixed by trowel on a non-absorbent board - for larger quantities a suitable mechanical mixer must be used.

Application

Once mixed, FEBOX MP can be trowelled directly onto the surface without the need for priming (except on very porous or very smooth substrates where EPOXY PRIMER should first be applied) and then compact into place. Trowel to finish required. Use all mixed material within the pot life period.

Curing

Varies with temperatures and thickness of application. At normal temperatures a 6 mm thick layer initially sets after approximately 8 hours. Cure is substantially complete after 24 hours, but full chemical resistance is not obtained until after 7 days

Coverage

5 kilos will cover approximately 0.8 m² at an average thickness of 3 mm.

Storage

Store in unopened containers in cool, dry conditions at ambient temperatures between 5 - 35°C (ideally 15 - 20°C).

Shelf Life

12 months if stored in accordance with manufacturer's instructions.

Performance Data

Density (mixed)	1800kg/m ³
Application/curing temperatures	+4 to +40°C
Service Temperatures	-20 to +50°C
Compressive strength: (BS6319 prt2)	50N/mm ² @ 24 hours (20°C)/ 85N/mm ² @ 7 days (20°C)
Tensile Strength: (BS6319 prt7)	8N/mm ² @ 24 hours (20°C)/ 12N/mm ² @ 7 days
Flexural Strength (BS6319:3)	30N/mm ² @ 7 days (20°C)
Abrasion resistance	High
Adhesive strength to concrete	Greater than the internal strength of concrete itself
Pot Life	The pot life of this product is 45 minutes at 20°C /70 mins at 10°C
Cure Time	Initial: 8 hours Final: 24 hours @ 20°C; longer at lower temperatures. Do not apply below 4°C
Cleaning	Clean tools etc with finishing solvent or xylene immediately after use
Chemical resistance	Will protect concrete from attack from most acids, alkalis, mineral/vegetable oils, Caustic solutions, sea water, grease etc

Febox MP



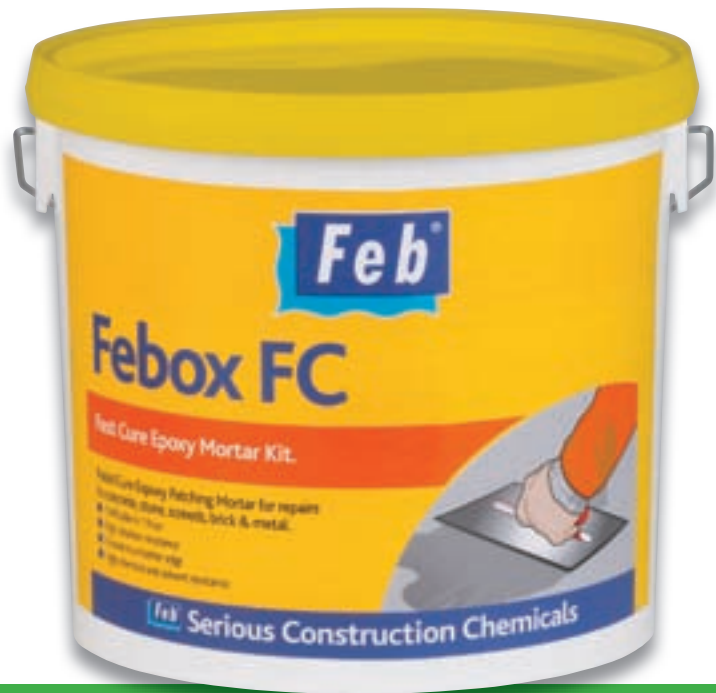
Febox FC

Fast Cure Epoxy Mortar Kit

Rapid Cure Epoxy Patching Mortar for repairs to concrete, stone, screeds, brick & metal.

- Trafficable in 1 hour
- High abrasion resistance
- Trowels to a feather edge
- High chemical and solvent resistance

Colour	Product Code	Pack Size	Box Qty
Grey	FBBOXFC5	5KG	1



Concrete Repair & Speciality Mortars

Febox FC

Product Description

FEBOX FC is a quick setting, two-part epoxy patching mortar which can affect 8 hour repairs to concrete. Strengths in excess of those of 28 day old concrete can be gained in same day. Mainly intended for horizontal surfaces. FEBOX FC bonds tenaciously to concrete, masonry and non-vibrating steel, allowing a hard durable repair to be made without delay.

Typical Uses

- Repairing concrete floors.
- Filling cracks in concrete and masonry.
- Repairing damaged concrete pipes and kerbs.
- As a high strength structural gap filler.
- Repairing broken edges on steps.
- Levelling worn floors taking constant traffic.
- Repairing spalled roads and runways.
- Repairing and joining pre-cast concrete.
- Covering concrete or bedding tiles subject to corrosive conditions.

Features & Benefits

- Same day trafficking.
- High abrasive resistance.
- High chemical and solvent resistance.
- Excellent adhesion to all sound surfaces.
- Bonds to clean, non-vibrating steel.
- Can be used indoors or outdoors.
- Greater 28 day strength than concrete.
- Can be trowelled to a feather edge.
- Trowels to a smooth finish.

Instructions for Use

Preparation of substrate

The substrate must be of sound quality and of adequate strength to receive the FEBOX FC. Concrete substrates must be free from dirt, grease, oil, fats or any other contaminant. To ensure a sound surface, all laitance should be removed by mechanical preparation or grit blasting. Remove

dust and thoroughly clean off. New concrete should be at least 28 days old. Metal - all rust, oil and grease etc. must be removed to leave the metal thoroughly clean and unoxidised.

Mixing

Each pack contains the correct proportions of base and reactor - no attempt should be made to mix only a portion of the pack.

Single packs can be thoroughly mixed by trowel on a non-absorbent board - for larger quantities a suitable mechanical mixer must be used.

Application

Once mixed, FEBOX FC can be trowelled directly onto the surface without the need for priming (except on very porous or very smooth substrates where EPOXY PRIMER should first be applied) and then compact into place. Trowel to finish required. Use all mixed material within the pot life period.

Curing

Varies with temperatures and thickness of application. At normal temperatures a 6 mm thick layer initially sets after approximately 1 hour. Cure is substantially complete after 8 hours, but full chemical resistance is not obtained until after 24 hours.

Coverage

5 kilos will cover approximately 0.8 m² at an average thickness of 3 mm.

Storage

Store in unopened containers in cool, dry conditions at ambient temperatures between 5 - 35°C (ideally 15 - 20°C).

Shelf Life

12 months if stored in accordance with manufacturer's instructions.

Performance Data

Density (mixed)	1800kg/m ³
Application/curing temperatures	+4 to +40°C
Service Temperatures	-20 to +50°C
Compressive strength (BS6319 prt2)	50N/mm ² @ 24 hours (20°C)
Tensile Strength (BS6319 prt7)	15N/mm ² @ 7 days (20°C)
Abrasion resistance	High
Adhesive strength to concrete	Greater than the internal strength of concrete itself
Pot Life	The pot life of this product is 20 minutes at 20°C
Cure Time	Initial: 1 hour. Final: 24 hours @ 20°C; longer at lower temperatures. Do not apply below 4°C
Cleaning	Clean tools etc with finishing solvent or xylene immediately after use
Chemical Resistance	Will protect concrete from attack from most acids, alkalis, mineral/vegetable oils, Caustic solutions, sea water, grease etc.



Febox LW

Lightweight Epoxy Mortar Kit

Lightweight Epoxy Patching Mortar for vertical and overhead repairs to concrete, stone, brick & steel

- Non slump - non shrink
- High strength impact resistant
- Resistant to chemicals & solvents
- Trowels to a feather edge

Colour	Product Code	Pack Size	Box Qty
Grey	FBBOXLW	2.5KG	1



Concrete Repair & Speciality Mortars

Product Description

FEBOX LW is a two-component solvent free epoxy resin mortar specifically designed for overhead and high build vertical applications. FEBOX LW comes complete with primer, gloves and finishing solvent.

Typical Uses

- General repairs, renovation and rendering to: Soffits, undersides of floors, beams, etc. Honeycombed or spalled concrete.
- Wherever a high build impervious mortar with excellent chemical resistance and maximum mechanical properties is required, such as, sewerage works, bridge repairs, manhole linings, pipes etc.
- Overhead work and vertical surfaces where normal epoxy resin compounds are unsuitable.
- Wherever effective repair of spalled concrete is required to provide all round protection to reinforcing steel, vertical renders for linings, etc.
- Used as coving mortar or lining mortar for bund walls and channels (may need sealing with suitable chemical resistant paint depending on chemical exposure).

Features & Benefits

- Suitable for high build application and for vertical and overhead surfaces.
- Good adhesion and cure under damp conditions/ Good chemical resistance.

Instructions for Use

Preparation of Substrate

All surfaces must be clean and free of surface moisture. Remove all contamination.

Priming

All surfaces must be primed. Use the EPOXY PRIMER provided in the pack/unit. This is a two pack system. Thoroughly mix resin and hardener components for 3-4 minutes and apply evenly to the substrate using a stiff brush. The contents of the container must be used within 45 minutes of mixing. It is essential to apply the mortar on

top of the primer whilst the latter is still tacky. If the first priming coat should start to gel, apply a second priming coat before applying the mortar. 1 litre of EPOXY PRIMER will be sufficient to treat approximately 4-5 m² (dependant on porosity and texture of surface).

Mixing

Add the hardener to the base component. Thoroughly mix to a homogeneous lump free consistency.

Application

The thoroughly mixed mortar should be applied by trowel, knife, wooden float or gloved hand. Press well into the primed surface and compact to ensure positive and permanent adhesion. Finishing of FEBOX LW is aided by wetting the steel trowel with a little hydrocarbon solvent. For large areas layer thickness should not exceed 40mm. For smaller areas up to 50mm can be applied. Minimum

thickness is 3mm. Further priming is necessary between layers and the backing layer should be cross hatched before cure takes place to provide a mechanical key.

Coverage

2.5 kg pack will cover approximately 0.5 metres at 5 mm thick dependent upon the surface texture.

Cleaning

Tools must be cleaned immediately after use with finishing solvent or xylene.

Storage

Store in unopened containers in cool, dry conditions at ambient temperatures between 5 - 35°C (ideally 15 - 20°C).

Shelf Life

12 months from date of manufacture if stored in accordance with manufacturer's instructions.

Performance Data

Service temperature limits	-20°C to 50°C
Application temperature limits	-4°C to 40°C
Density (BS 6319:Pt1)	1050Kg/m ³
Sag @ 25mm thickness	none at 25°C
Full cure @ 25°C	7 days
Compressive strength @ 20°C (BS 6319:Pt 2) (ASTM C580) 7 day cure	35.0 N/mm ²
Flexural strength @ 20°C (BS 6319:Pt.7) (ASTM C307)	20.0 N/mm ²
Tensile strength @ 20°C (BS6319:Pt7) (ASTM C307)	10 N/mm ²
Bond strength (slant shear method) (BS6319:Pt4)	Concrete 34.1 N/mm ² / Steel 27.5 N/mm ²
Working Time	@ 10°C 1 hour/@ 15°C 40 mins/@ 25°C 30 mins
Cure rates	@ 10°C 7-10 days/@ 15°C 5-7 days/@ 25°C 3-5 days
Chemical resistance	Good

FEBOX LW may yellow on exposure to certain chemicals or environments. This yellowing does not affect the chemical or mechanical properties of FEBOX LW.



Supercrete

Bolt Grouting & Patching Mortar

Rapid Setting 2 Component Polymer Resin System.

- For crack filling, bedding manhole covers, lintels, kerbs and drainage channels
- For anchoring bolts to all solid substrates
- Non shrink, impact resistant
- Yields up to 0.5 litres per kilo

Colour	Product Code	Pack Size	Box Qty
Green/Grey	FBSUPER3	3KG	1



Concrete Repair & Speciality Mortars

Supercrete

Product Description

FEB SUPERCRETE is a two-component polyester resin compound consisting of a liquid resin and a powder hardener which can be mixed in varying ratios to achieve varied consistency to accommodate a wide variety of applications.

Typical Uses

The areas of use for this product are many and varied. A number of the more popular applications are given below:

- Bedding and location of coping kerbstones etc and small patch repairs to concrete beams, posts, lintels, precast units.
- Re-profiling of arises and bedding of concrete units, steelwork, road furniture etc.
- Grouting of dowel pins, bolts, etc and bedding and fixing of slip bricks, cladding etc.
- Rapid fixing of post railings, balustrades, etc.

Features & Benefits

- Extremely versatile in many applications and simple to batch and mix - Variable mix consistency can be obtained
- Excellent adhesion to most construction materials and will cure in damp conditions and at low temperatures.
- High, early and ultimate strengths along with Good chemical resistance

Instructions for Use

Preparation of Substrate

Ensure that all surfaces to which FEB SUPERCRETE is to bond are free from oil, grease, paint, curing compounds etc. Remove any dust, laitance or loose friable materials. It is preferable that any smooth surfaces are roughened prior to application.

Mixing

It is possible to mix FEB SUPERCRETE to application consistencies ranging from a free flowing pourable grout to a heavy mortar.

Mixes will normally range from a resin rich 2:1 powder to resin giving a product of a flowable

consistency. Up to 4:1 powder to resin will produce a trowellable mortar. The required quantity of resin component should be poured into a clean plastic bucket and the powder added slowly stirring until the desired consistency is achieved and the mixture is smooth, lump free and uniform in colour.

Do not mix more material than can be used within 20 minutes. Use of a mixing paddle and slow speed drill will greatly aid the mixing process.

Application

FEB SUPERCRETE should not be applied in layers greater than 20mm. Where thickness is in excess of 20mm consult your FEB Technical Services Department. Application of FEB SUPERCRETE in a mortar consistency is normally carried out using a steel float or trowel. A smear of Cleaning Solvent applied to the face of the trowel will aid application ensuring that FEB SUPERCRETE is trowelled well into the prepared surface ensuring good contact and adhesion.

Minimum application thickness will depend on location and substrate. However, a general guide is

up to 20 mm on horizontal surfaces and up to 12 mm on vertical surfaces and 4 - 6 mm on overhead and soffit work.

When FEB SUPERCRETE is used in a flowable/pourable consistency it is important that the product is allowed to settle and level in the hole or pocket. The product should be placed as soon as possible after mixing.

Coverage

1 kilo of FEB SUPERCRETE mixed at a ratio of 2 part powder: 1 part resin will yield approximately 0.37 litres.

1 kilo of FEB SUPERCRETE mixed at a ratio of 4 parts powder: 1 part resin will yield approximately 0.5 litres.

Storage

Store in dry conditions at moderate temperatures away from direct sunlight.

Shelf Life

1 year from date of manufacture when stored in unopened containers in accordance to manufacturers recommendations.

Performance Data

Density | 1920 Kg/m³

Strength as tabulated below (results are based on normal 3.2 to 1 mix by volume): At lower temperatures, strength gain is correspondingly slower.

Strength property/ N/mm ²	Temp °C	1hr	3hrs	24hrs	Ultimate
Compressive (BS6319 part 2)	35	35	-	99	99
	20	-	33	78	99
Tensile (BS6319 part 3)	35	4.3	-	14	14
	20	-	7.3	11	14
Flexural (BS6319 part 7)	35	11	-	37	37
	20	-	16	31	37

Setting Times

15°C	2 hours
20°C	1 hour
25°C	30 minutes
35°C	17 minutes



FEBCURE SUPERCLEAR 181	30
FEBCO	31
FEBFLOR	32
FEBFLOR PLUS	33
FEBFLOR LATEX POWDER	34
FEBFLOR LATEX LIQUID	35
FEBFLOR ULTRALAY	36

Flooring Screeds & Sealers





Febcure Superclear 181

Multi-Purpose Sealer & Concrete Curing Aid

- Tough, totally clear sealer for dust sealing, enhancing all mineral surfaces and binding friable substrates
- Can be applied to stone, concrete, brick & composite panels
- Strengthens and hardens concrete, and helps prevent drying shrinkage cracks
- Interior & exterior use

Colour	Product Code	Pack Size	Box Qty
Clear	FBCLEAR5	5LTR	4
	FBCLEAR25	25LTR	1
	FBCLEAR205	205LTR	1



Flooring Screeds & Sealers

Febcure Superclear 181

Product Description

FEBCURE SUPERCLEAR 181 is a multi purpose sealer and concrete curing aid based on acrylic resins in solvent. FEBCURE SUPERCLEAR 181 conforms to the requirements of ASTM C309: Type 1 Class B AASHTO M-148 Type 1

Typical Uses

- As a more effective and economical alternative to separate curing and priming/sealing regimes.
- Also suitable as a sealer for use on all concrete surfaces, pavers and flags.
- Economical enhancement of concrete flatwork.
- In high-rise construction to eliminate the requirement for water curing.

Features & Benefits

- Eliminates the need for water curing and imparts a harder dust free surface.
- Non-degrading, acts as a primer system.
- Improves abrasion resistance of floors.
- Reduced labour costs and economic in use/ reduces chloride penetration.

Instructions for Use

Preparation

As a sealer for flags and stone and cured concrete: Ensure the surfaces to be treated are clean and free from any mould or fungal growth. If oil stains are present, remove with detergent and hot water. Ensure cement composite pavers are thoroughly degreased and free from release agents, which will affect penetration. If mould and fungal growth are present, clean surfaces with EVERBUILD MOSS-AWAY as directed. All artificial stone (cement based) and all block pavers must be left for three months minimum after placing before over coating with this product. This will allow salts to leach out which otherwise may cause unsightly white patches appearing beneath the sealer, especially when the patio is wet. Application to a wet or water-saturated surface will give poor adhesion.

As a concrete curing aid: Wait until initial surface sheen has disappeared prior to application. The compound should be spray applied as evenly as possible to the freshly placed concrete. For horizontal surfaces the FEBCURE SUPERCLEAR 181 should be applied as soon as the initial surface sheen has disappeared from the concrete face. In the case of formed concrete, the product should be applied immediately on removal of the formwork.

Application

NOTE: DO NOT APPLY BELOW +5°C.

As a sealer for flags, stone and cured concrete: Apply FEBCURE SUPERCLEAR 181 by brush, roller or foam neoprene squeegee from a suitable container or tray. NEVER pour this product directly onto surface. Work well into joints for maximum penetration. DO NOT LEAVE SURPLUS MATERIAL ON THE SURFACE. Two coats are normally recommended, allowing 3-4 hours minimum between coats.

As a concrete curing aid: Wait until initial surface sheen has disappeared, then apply by spray as evenly as possible over freshly placed concrete at a rate of 4.5 to 5.5 m² per litre. For areas subject to heavy traffic, it is recommended that a second coat be applied 24 hours later.

Subsequent Surface Finish

The acrylic resin in FEBCURE SUPERCLEAR 181 ensures that bond is maintained with adhesives used for installing tiles, and other floor coverings.

FEBCURE SUPERCLEAR 181 will act as a primer for paint systems and will enable most surface treatments to progress with minimal delay. Typical surface treatments that will bond to surfaces with FEBCURE SUPERCLEAR 181 are:

- Water based emulsion paints or paste tile adhesives containing PVA, PVC, acrylic co-polymers/bitumen emulsions and coatings.
- Polymer modified cement systems/Epoxy resin compositions which do not rely on penetration for substrate bond.

Coverage

The recommended rate of application is 4.5 to 5.5 square metres per litre. When using FEBCURE SUPERCLEAR 181 for floor areas where maximum chemical and wear resistance is required, it is recommended that further coats (1 or 2 as desired) be applied after 24 hours.

Storage

Store in cool conditions away from direct sunlight. Avoid sources of ignition - **No Smoking**. Flammable liquid.

NB: If stored below 10°C FEBCURE SUPERCLEAR 181 may go cloudy and separate. However, on warming and agitation product will reconstitute.

Shelf Life

Minimum two years when stored in unopened containers according to the manufacturer's instructions.

Performance Data

Specific gravity @ 20°C	0.82
Finished film appearance	Clear, tack free, water repellent film
Water Retention: ASTM C156	Pass
Curing Efficiency BS 7542	>70%
Drying Time	45 mins at 20°C
Cleaning	Clean all spray equipment, particularly nozzles using white spirit. It is advisable when a spray nozzle is not in use to leave it immersed in solvent.



Febco

Concrete Hardening & Dust Proofing Solution

For use in Factories, Garages & Industrial Units

- Seals and hardens old & new concrete floors
- Interior & exterior use

Colour	Product Code	Pack Size	Box Qty
Clear	FEBCO5	5LTR	4
	FEBCO25	25LTR	1
	FBCO200	200LTR	1



Flooring Screeds & Sealers

Product Description

FEBCO is a colourless, low viscosity liquid for application to concrete floors. It hardens and dust proofs the surface by combining with the free lime produced during hydration of the cement.

Typical uses:

FEBCO forms hard insoluble crystals thus binding the particles together and sealing the surface to form hard impermeable non-dusting concrete and pavings in:

- Factories.
- Garages.
- Industrial units and where dusting could be a problem.

Features & Benefits

- Permanent treatment.
- New or old floors can be treated.
- Used straight from the container.
- Simple and easy to use.

Instructions for use

Preparation

Remove all oil, grease, etc. Brush the floor well with a hard broom or wire brush. Remove all dust and loose matter using a soft broom or industrial vacuum. If wetting of the floor has taken place during preparation, it must be allowed to dry out before commencement of FEBCO application.

Application

Wear rubber boots. Stir the FEBCO before use. Pour evenly, or use a plastic watering can to sprinkle the FEBCO liquid over the surface of the concrete. Alternatively spray using a knapsack sprayer. Then sweep the FEBCO backwards and forwards over the floor to ensure even penetration. Do not allow puddles to form.

Any FEBCO not totally absorbed into the surface must be removed by mops or squeegees before drying.

24 hours after initial treatment, apply a second coat in a similar manner (some floors may require three coats).

24 hours after the final coat, wash down the floor using clean water. The floor may be walked on and used during the treatment period.

New Concrete

New concrete should be allowed to cure fully (21 days minimum).

Dense Floors

Hard compacted/power floated surfaces may not have sufficient porosity to allow absorption of the FEBCO.

Prior to treatment test for absorption of water. If concrete is absorbent, test a small area with neat FEBCO and establish whether adequate penetration is achieved.

Porous Floors

On particularly porous floors that are nevertheless sound FEBCURE SUPERCLEAR 181 should be used.

Coverage

As porosity and texture of concrete floors and cement paving's varies considerably, it is not possible to quote accurate coverage rates, but the following will provide a guide:

Tamped concrete: Approx. 3.5m² per litre.

Smooth concrete: Approx. 5m² per litre.

Storage

Stir before use. Will freeze but can be reconstituted by stirring after thawing.

Shelf Life

Up to two years when stored in accordance with manufacturer's instructions.

Performance Data

Appearance	Colourless liquid, silicate based
Specific gravity @ 20°C	1.08
Cleaning	All equipment should be washed in clean water immediately after use



Febflor

Concrete Floor Self Levelling Compound

- For preparing concrete and screed floors
- Self smoothing
- Application depth, 2-6mm
- May be covered after 8 hours
- Casein free, for hygienic applications
- Coverage, 5m², laid at a depth of 3mm

Colour	Product Code	Pack Size	Box Qty
Grey	FBFLOR20	20Kg	1



Flooring Screeds & Sealers

Febflor

Product Description

FEBFLOR is a cementitious floor levelling and smoothing compound in powder form requiring only the addition of water. FEBFLOR can be easily spread on to suitably prepared stable substrates in order to smooth surfaces, prior to laying final floor coverings. This product is not designed as a final wearing course to receive traffic and must be covered with tiles, lino, carpet etc.

Typical Uses

For levelling and smoothing concrete and screeded floors prior to laying final wearing, coverings such as carpets, sheet vinyl, tiles etc.

Features & Benefits

- Self smoothing - Sets hard within 1½ to 3 hours depending on temperature and can be trowelled to a feather edge.
- Coverings may be laid 6-8 hours after application.
- Pre-blended requiring only the addition of water.
- Easy to use and economical.

Instructions for Use

Preparation of Substrate

Floors to be treated must be free from grease, dust and loose particles. Existing concrete/asphalt screeds must be a minimum of 4 weeks old before applying this product. Prepare floors by dampening with water then priming with FEBOND PVA diluted 1 part PVA to 3 parts water.

Application

20kg of FEBFLOR will require 5 litres of water (or 3 parts powder to 1 part water - volume: volume ratio). DO NOT USE EXCESS WATER. Always add the powder to water. This should be carried out by stepwise addition whilst stirring until a free flowing creamy compound is produced. Pour the mixture out into the prepared floor and allow it to find its own level. Trowel down lightly to achieve an overall thickness not exceeding 6mm. Where further

finishing is required, allow the surface to stiffen, usually ¾ to one hour after application, and lightly sprinkle with water and carefully trowel to produce a smooth appearance. Do not sprinkle excessive water or over trowel at this stage. Additional layers, each not exceeding 6mm, may be applied to achieve the required depth only when the first coat is dry (8 hours minimum @ 20°C). Prime with FEBOND PVA diluted 1 part PVA to 3 parts water between layers.

For areas where deep depressions occur, (greater than 6mm in depth), patch the floor with JETCEM RAPID SET CEMENT raise the depressions to the general level of the remaining floor, allow to dry (minimum 8 hours @ 20°C) and prime with FEBOND PVA diluted 1 part PVA to 3 parts water before applying this product as directed.

For areas where heavy loading and/or trafficking are anticipated on the final surface, mix FEBFLOR with neat FEBFLOR LATEX LIQUID rather than water. This will improve flexibility, adhesion and durability of the screed. The mixing ratio is again 20kg of powder to 5ltrs of neat liquid. Again, prime the floor with FEBOND PVA diluted 1 part PVA to 3 water.

Timber floors/existing tiling/asphalt

Degrease and roughen up any glaze on existing tiling or asphalt prior to laying this product.

Suitable for small areas (1m² max) over interior

timber floors only. Timber floors must be securely screwed down at 300mm centres. In all cases, apply FEBOND SBR to the floor at a 1:1 dilution with water. Mix FEBFLOR with neat FEBFLOR LATEX LIQUID (20kg of powder to 5ltrs of liquid) and apply to sub floor whilst the bonding coat is still tacky. The free-flowing properties of FEBFLOR are reduced after 10 minutes and workability will be lost after 30 minutes. Never reconstitute the mix after initial stiffening has taken place. Do not work below 4°C. Always turn off under-floor heating and allow sub-floor to cool and do not switch it on again for at least 24 hours after completion. Do not allow to dry too quickly in hot weather.

Coverage

20kg covers approximately 5m² at 3mm (standard) depth depending on substrate porosity.

Storage

Store in cool, dry conditions as for Portland Cement.

Shelf Life

9 months when stored as recommended by the manufacturer.

Performance Data

Appearance	Grey granular powder
Pot life	20 minutes at 20°C
Specific Gravity @ 20°C	1.6 gcm ³ (dry); 2.3 gcm ³ (wet or cured)
Application Temp	4°C to 35°C
Open time/Pot life	20 mins @20°C
Overlay time	8 hours @20°C
Thickness	2mm- 6mm



Febflor Plus

Flexible Concrete Floor Self Levelling Compound

- For preparing concrete and screed floors
- Self smoothing
- Application depth, 2-6mm
- May be covered after 8 hours
- Casein free, for hygienic applications
- Coverage, 5m², laid at a depth of 3mm

Colour	Product Code	Pack Size	Box Qty
Grey	FBFLORPLUS	20Kg	1



Flooring Screeds & Sealers

Product Description

FEBFLOR PLUS is a cementitious floor levelling and smoothing compound in powder form (with added latex powder) requiring only the addition of water. FEBFLOR PLUS can be easily spread on to suitably prepared stable substrates in order to smooth surfaces, prior to laying final floor coverings. This product is not designed as a final wearing course to receive traffic and must be covered with tiles, lino, carpet etc.

Typical Uses

For levelling and smoothing concrete and screeded floors prior to laying final wearing, coverings such as carpets, sheet vinyl, tiles etc. where heavier trafficking is anticipated or increased flexibility are required.

Features & Benefits

- Self smoothing – sets hard within 1½ to 3 hours depending on temperature.
- Added latex improves flexibility, adhesion and abrasion resistance.
- Coverings may be laid 6-8 hours after application.
- Pre-blended requiring only the addition of water.
- Economical.
- Can be trowelled to a feather edge.

Instructions for Use

Preparation of Substrate

Floors to be treated must be free from grease, dust and loose particles. Existing concrete/asphalt screeds must be a minimum of 4 weeks old before applying this product. Always prepare floors by dampening with water then priming with FEBOND PVA diluted 1 part PVA to 3 parts water to give a sound, slightly damp surface.

Application

20kg of FEBFLOR PLUS will require 5 litres of water (or 3 parts powder to 1 part water - volume: volume ratio). DO NOT USE EXCESS WATER. Always add the powder to water. This should be carried out by stepwise addition whilst stirring until a free flowing creamy compound is produced. Pour the mixture out into the prepared floor and allow it to find its own level. Trowel down lightly to achieve an overall thickness not exceeding 6mm. Where further finishing is required, allow the surface to stiffen, usually ¾ to one hour after application, and lightly sprinkle with water and carefully trowel to produce a smooth appearance. Do not sprinkle excessive water or over trowel at this stage.

Additional layers, each not exceeding 6mm, may be applied to achieve the required depth only when the first coat is dry (8 hours minimum @ 20°C). Prime with FEBOND PVA diluted 1 part PVA to 3 parts water between layers.

For areas where deep depressions occur, (greater than 6mm in depth), patch the floor with JETCEM RAPID SET CEMENT raise the depressions to the general level of the remaining floor, allow to dry (minimum 8 hours @ 20°C) and prime with FEBOND PVA diluted 1 part PVA to 3 water before applying this product as directed.

Timber Floors/Existing Asphalt - Degrease and roughen up any glaze on existing tiling or asphalt prior to laying this product. Suitable for small areas (1m² max) over interior timber floors only.

Timber floors must be securely screwed down at 300mm centres. In all cases, apply FEBOND SBR to the floor at a 1:1 dilution with water. Mix FEBFLOR PLUS with water as above and apply to sub floor whilst the bonding coat is still tacky. The free-flowing properties of FEBFLOR PLUS are reduced after 10 minutes and workability will be lost after 30 minutes. Never reconstitute the mix after initial stiffening has taken place. Do not work below 4°C. Always turn off under-floor heating and allow sub-floor to cool and do not switch it on again for at least 24 hours after completion. Do not allow to dry too quickly in hot weather.

Coverage

20kg covers approximately 5m² at 3mm (standard) depth depending on substrate porosity.

Storage

Store in cool, dry conditions as for Portland Cement.

Shelf Life

9 months when stored as recommended by the manufacturer.

Note: This product is NOT recommended as a final wearing surface.

Performance Data

Appearance	Grey granular powder
Cleaning	All tools and equipment should be cleaned with water
Specific Gravity @ 20°C	1.6 gcm ³ (dry); 2.3 gcm ³ (wet or cured)
Application Temp	4°C to 35°C
Open time/Pot life	20 mins @ 20°C
Overlay time	8 hours @ 20°C
Thickness	0.5mm-6mm

Febflor Plus



Febflor Latex Powder

Two Component Floor Smoothing Compound

- Pre-measured formula to provide a durable, flexible compound when mixed with Febflor Latex Liquid
- Self smoothing
- For preparing uneven and screed floors
- Casein free, for hygienic applications
- Coverage, 5m², laid at a depth of 3mm

Colour	Product Code	Pack Size	Box Qty
Grey	FBFLORLATPW	20KG	1



Flooring Screeds & Sealers

Febflor Latex Powder

Product Description

FEBFLOR LATEX POWDER is a cement based product which when mixed with FEBFLOR LATEX LIQUID, may be used to level out uneven floors and screeds prior to laying ceramic and thermoplastic tiles, lino, wood block flooring or carpet. When mixed as directed, the two part compound provides a free flowing mix that sets in 3-4 hours and can be overlaid after 24 hours at normal temperatures. NOTE: This product is not suitable for use as a final wearing surface.

Typical Uses

For levelling and smoothing concrete and screeded floors prior to laying final wearing, coverings where heavy loading and/or trafficking are anticipated on the final surface.

Features & Benefits

- Pre-batched for quality control. Only requires onsite mixing of Powder and Liquid components.
- Easy to use.
- Economical.
- Can be trowelled to a feather edge.
- Self smoothing.
- Sets hard within 3-4 hours depending on temperature.
- Coverings may be laid 24 hours after application.
- Wear-resistant.
- Added flexibility and water resistance.
- Non-dusting.

Instructions for Use

Preparation of Substrate

Floors to be treated must be free from grease, dust and loose particles. Existing concrete/asphalt screeds must be a minimum of 4 weeks old before applying this product. Always prepare floors by dampening with water then priming with FEBOND PVA diluted 1 part PVA to 3 parts water to give a sound, slightly damp surface.

Application

20kg of FEBFLOR LATEX POWDER will require 5 litres of FEBFLOR LATEX LIQUID (or 3 parts powder to 1 part water - volume: volume ratio). Always add the powder to liquid. This should be carried out by stepwise addition whilst stirring until a free flowing creamy compound is produced. Pour the mixture out into the prepared floor and allow it to find its own level. Trowel down lightly to achieve an overall thickness not exceeding 6mm. Where further finishing is required, allow the surface to stiffen, usually ¾ to one hour after application, and lightly sprinkle with water and carefully trowel to produce a smooth appearance. Do not sprinkle excessive water or over trowel at this stage. Additional layers, each not exceeding 6mm, may be applied to achieve the required depth only when the first coat is dry (8 hours minimum @ 20°C). Prime with FEBOND PVA diluted 1 part PVA to 3 parts water between layers.

For areas where deep depressions occur, (greater than 6mm in depth), patch the floor with JETCEM RAPID SET CEMENT raise the depressions to the general level of the remaining floor, allow to dry (minimum 8 hours @ 20°C) and prime with FEBOND PVA diluted 1 part PVA to 3 water before applying this product as directed.

Timber floors/existing tiling/asphalt - degrease and roughen up any glaze on existing tiling or asphalt prior to laying this product. Suitable for small areas (1m² max) over interior timber floors only. Timber floors

must be securely screwed down at 300mm centres. In all cases, apply FEBOND SBR to the floor at a 1:1 dilution with water. Mix FEBFLOR LATEX POWDER with neat FEBFLOR LATEX LIQUID (20kg of powder to 5ltrs of liquid) and apply to sub floor whilst the bonding coat is still tacky.

The floor to be treated must be free from dust, loosely adhering material, plaster and cement droppings, grease, oil and paint, and any contaminants which may prevent adhesion. All surfaces should be sealed using FEBOND PVA, diluted with water at a rate of 1 part FEBOND PVA to 3 parts water. Do not mix more than can be laid in 20 minutes. The free-flowing properties of FEBFLOR LATEX POWDER are reduced after 10 minutes and workability will be lost after 30 minutes. Never reconstitute the mix after initial stiffening has taken place. Do not work below 4°C. Always turn off under-floor heating and allow sub-floor to cool and do not switch it on again for at least 24 hours after completion. Do not allow to dry too quickly in hot weather.

Coverage

20kg covers approximately 5m² at 3mm (standard) depth depending on substrate porosity.

Storage

Store in cool, dry conditions as for Portland Cement.

Shelf Life

9 months when stored as recommended by the manufacturer.

Performance Data

Appearance	Grey granular powder
Pot life	20 minutes at 20°C
Cleaning	All tools and equipment should be cleaned with water.
Specific Gravity @ 20°C	1.6 gcm ³ (dry); 2.3 gcm ³ (wet or cured)
Application Temp	4°C to 35°C
Open time/Pot life	20 mins @ 20°C
Overlying time	24 hours @ 20°C
Thickness	0.5mm- 6mm



Febflor Latex Liquid

Levelling and Smoothing Compound

Floor Levelling Compound with Added Flexibility

- Suitable for light trafficking
- For use with Febflor latex powder and other powder screeds and adhesives

Colour	Product Code	Pack Size	Box Qty
Clear	FBFLORLATLQ	5LTR	4



Flooring Screeds & Sealers

Product Description

FEBFLOR LATEX LIQUID is a polymer based latex additive for imparting flexibility to cement based floor levelling compounds, adhesives and grouts when they are used in areas of moderate movement e.g. on wooden floors or asphalt. FEBFLOR LATEX LIQUID will also improve the water and chemical resistance of these products as well as increasing their resistance to abrasion and help stop dusting.

Typical Uses

- As an additive to FEBFLOR LATEX POWDER to improve strength, flexibility and adhesion.
- As an additive to cement based ceramic tile adhesives to improve strength, flexibility and adhesion.
- As an additive to cement based ceramic tile grouts to improve strength, flexibility and adhesion.

Features & Benefits

- Pre-batched for quality control. Only requires onsite mixing of 20kg Powder with 5ltr liquid.
- Easy to use.
- Economical.
- Sets hard within 3-4 hours depending on temperature.
- Wear-resistant.
- Added flexibility and water resistance.
- Non-dusting.

Instructions for Use

Preparation of Substrate

All surfaces must be clean, dry and free from dust, grease and other contaminants. Prepare surfaces as detailed on bag.

Mix neat with either FEBFLOR LATEX POWDER, FEBFLOR SELF LEVEL, FEB PERMASET, FEB FASTSET or FEB GAPFIL in the approximate ratio 20kg of powder to 5ltrs of FEBFLOR LATEX LIQUID. Apply as directed.

NOTE. This product may slightly retard the set.

Storage

Store in cool, dry conditions. Protect from frost.

Shelf Life

1 year if stored as recommended by the manufacturer.

Performance Data

pH	9 approx.
Viscosity	10ps (RVT 1/10rpm)
Surface tension	8 dyne/cm
M.F.F.T	0°C
Specific Gravity @ 20°C	1.010 kg/ltr
Na2O equivalent	0.7%
Freeze Thaw	passes 5 cycles at -10°C - excellent
Calcium ions	compatible
Aluminium III ions	compatible
Antioxodant	added
Tensile strength at break	2.5N/mm ²
Elongation at break	500%
Cleaning	Wash tools with water immediately after use. Hands should be washed with soap and water or, if material has dried, a suitable propriety hand cleaner should be used.

Febflor Latex Liquid



Febflor Ultralay

Heavy Duty Universal Levelling & Resurfacing Compound

- Fast setting, foot trafficable within 2 hours, can be tiled within 3 hours
- Interior and exterior use
- Can withstand vehicular traffic
- Final wearing coat, overpaintable
- Water and frost resistant
- Application depth 2-20mm
- Coverage, 2.4m², laid at a depth of 5mm

Colour	Product Code	Pack Size	Box Qty
Grey	FBFLORULTRA	20KG	1



Flooring Screeds & Sealers

Febflor Ultralay

Product Description

FEBFLOR ULTRALAY is an ultra high strength, rapid setting, abrasion resistant cement based powder, which when mixed with water, can be used to level out uneven floors and screeds. FEBFLOR ULTRALAY may be overlaid with common floor coverings or may be left as a final wearing surface. FEBFLOR ULTRALAY will even accept vehicular traffic. FEBFLOR ULTRALAY may be applied in one coat from 2-20mm in depth. Typical surfaces include concrete and screeding, existing unglazed ceramic tiles, brick, stone etc. When mixed as directed, the compound provides a free flowing mix that may be walked on in 2 hours and can be overlaid with ceramic tiles after only 3 hours at normal temperatures. NOTE: when overlaying with other floor coverings allow 24 hours drying time for each 10mm depth.

Typical Uses

For levelling and smoothing concrete and screeded floors where a heavy duty floor topping is required.

Features & Benefits

- Self smoothing, ultra durable finish – may be used as a final wearing surface and even withstands vehicular traffic.
- Rapid Setting – may be walked on in approximately 2 hours depending on temperature.
- May be covered with ceramic tiles after only 3hrs @ 20°C.
- Fills 2-20mm depth in one coat.
- Economical to use – simply pre-blend with water.

Instructions for Use

Preparation of Substrate

Floors to be treated must be free from grease, dust and loose particles. Existing concrete screeds must be a minimum of 4 weeks old before applying this product. Always prepare floors by dampening with water then priming with FEBOND PVA diluted 1 part PVA to 3 parts water to give a sound, slightly damp surface.

Application

20kg of FEBFLOR ULTRALAY will require 4 litres of water. DO NOT USE EXCESS WATER. Always add the powder to water. This should be carried out by stepwise addition whilst stirring until a free flowing creamy compound is produced. Pour the mixture out into the prepared floor and allow it to find its own level. Trowel down lightly to achieve an overall thickness not exceeding 20mm. For depths above 10mm, extension with 3mm granite chippings is recommended for heavy duty/vehicular applications. Where further finishing is

required, allow the surface to stiffen, usually ¾ to one hour after application, and lightly sprinkle with water and carefully trowel to produce a smooth appearance. Do not sprinkle excessive water or over trowel at this stage. Allow 3 days cure prior to subjecting to vehicular traffic @ 20°C, longer at lower temperatures.

Coverage

20kg of FEBFLOR ULTRALAY mixed with 4 litres of water will cover approximately 2.4m² at a depth of 5mm depending on substrate.

Storage

Store in cool, dry conditions as for Portland Cement.

Shelf Life

9 months when stored as recommended by the manufacturer.

Performance Data

Appearance	Grey granular powder
Pot life	20 minutes at 20°C
Cleaning	All tools and equipment should be cleaned with water
Application Temp	4°C to 35°C
Overlay time	3-8 hours @ 20°C depending on covering used
Thickness	2mm - 20mm



FEBTANK SUPER	38
WATERPLUG	40

Structural Waterproofing





Febtank Super

Waterproof Coating For Concrete And Masonry

- Permanent waterproofing system for basements, cellars, pools, reservoirs and below ground level applications
- Resists positive and negative water pressure
- Interior and exterior use
- Ready to use, mix with water
- Coverage, 3kg/m², laid at a depth of 3mm

Colour	Product Code	Pack Size	Box Qty
Grey	FBTANKSGY	25KG	1
White	FBTANKSWE	25KG	1



Febtank Super

Product Description

FEBTANK SUPER, when mixed with clean water, forms an extremely durable waterproof coating for concrete and masonry which is easily applied by a stiff hand brush, broom or spray. Both products may be covered with a decorative finish or left uncovered.

Typical Uses

Waterproofing of basements, foundations, water reservoirs, tunnels and floors and walls in shower and bathroom areas prior to the application of a decorative finish.

Features & Benefits

- Suitable for interior and exterior use, above and below ground level.
- Water vapour permeable. Solvent free.
- High bond strength, becomes integral part of the substrate.
- To be mixed with water only.
- Can be brush or spray applied.
- Can be applied onto a damp substrate.

Instructions for Use

Substrate Preparation

The surface to be coated must be clean and sound. Remove all traces of formwork, release agents, previous coatings, laitance and any contaminants that may affect the bond adversely. Suitable cleaning methods include high-pressure water treatment and abrasive blasting. Chemical cleaning treatments or aggressive percussive methods such as scabbling are NOT recommended. After the above treatment, surfaces must be thoroughly washed with clean potable water to remove all dust and loose particles. Cracks and bolt holes must be cut out and filled solid with FEB WATERPLUG prior to the application of FEBTANK SUPER.

Basements in areas containing high levels of soil or ground water sulphates may require a pre-treatment render.

Mixing

Mixing should only be done by hand or via slow speed drill/paddle (400-600rpm). Gradually add powder to water whilst mixing at a rate of 25kg powder to 5ltrs water to achieve a thick creamy lump free consistency. Leave to stand for 10mins prior to applying. Remix and add a very small amount of water if required to restore original consistency. Never use more than 5.4ltrs of total water. Mixed material must always be used within 30 minutes, or less under hot weather conditions.

Application

Note: Do not apply FEBTANK SUPER to frozen substrates or if the ambient temperature is below 5°C or expected to fall below 5°C within 24 hours. Avoid application in direct sunlight. Always apply the mix to a pre-dampened surface.

FEBTANK SUPER is a minimum two coat application system. Always dampen surfaces to aid adhesion. Remove all free standing water prior to application. Apply by stiff brush or broom or with traditional mortar spraying equipment. The actual thickness per coat must be between 1.0 and 2.0mm. Normal application rate is 3kg/m² for an overall two coat application. Increase to 6kg/m² for areas of excessive water pressure.

Refer to the Technical Datasheets for detailed instructions on applying first and second coats.

Curing

ALWAYS fine mist spray all the treated area as soon as

initial set has taken place and for as long as is possible. In cold, humid or unventilated areas (e.g. cellars) it may be necessary to leave the application for a longer curing period or to introduce forced air movement. NEVER use dehumidifiers during curing periods.

Subsequent Overcoating: FEBTANK SUPER is suitable for overcoating once correctly and thoroughly cured.

Gypsum Based Plaster: A bonding coat of FEBOND SBR diluted 1:1 with water is applied to surface and allowed to tack up (not dry). Apply plaster and finish as normal.

Cement Based Render: Use a slurry bonding coat consisting of 2 parts sand, one part cement gauged to a brushable paste with neat FEBOND SBR. Apply render whilst bonding coat is still tacky.

Final Decoration: Allow 6 months minimum to elapse before final decorative finishes are applied.

Coverage

A two-layer application requires approximately 3kg powder /m² depending on substrate.

Storage

FEBTANK SUPER should be stored under cover, clear of the ground and stacked not more than 6 bags high. Protect the materials from all sources of moisture and frost.

Shelf Life

6 months from date of manufacture.

Performance Data

Bulk density	1.25g/cm ³
Wet mixed density	2.06-2.07 g/cm ³
Pot life @ 20°C	45 mins
Compressive strength (N/mm ²)	55 (grey) 46 (white)
Tensile strength (N/mm ²)	4.0 (grey) 4.5 (white)
Flexural strength (N/mm ²)	9.0 (grey) 6.2 (white)
Final Set @ 20°C	Approx 6 hours





In recent time utilisation of previously unused basements and cellars has become a viable and economic alternative to home extensions or even moving home. However the ingress of water into basements continues to be the biggest barrier to the exploitation of these valuable and under utilised spaces.

The term 'tanking' is often used to describe the techniques and product used to remedy the problems of water ingress.

Whilst the methods of 'tanking' available are many and varied all depend upon some basic principles and we hope this article will provide insight into the problems and remedies associated with 'tanking'.

Water is in many ways similar to a persistent burglar by taking the least line of resistance to gain entry to a property and when finding entry blocked, searches around to try to find another open window or door. Similarly water will gain access into a basement via the easiest route but if a waterproofing treatment is only added at the point where water is obviously penetrating the fabric of the building, then it will try to find another way into the structure, in many cases appearing metres away from the original wet area. This is why the true meaning of the term 'tanking' bears comparison to a fish tank in reverse, a fish tank keeps water in, tanking to a cellar keeps water out. Imagine a fish tank without one end, would it hold water? No! The same effect in reverse is often experienced when waterproofing a basement and a wall or floor have not been treated because 'there was no sign of water in that area before we started'. So when assessing the extent of the waterproofing treatment needed try to think, where will the water go once you have blocked it?

Obviously the most efficient and sure option is to create a 'fully tanked' environment.

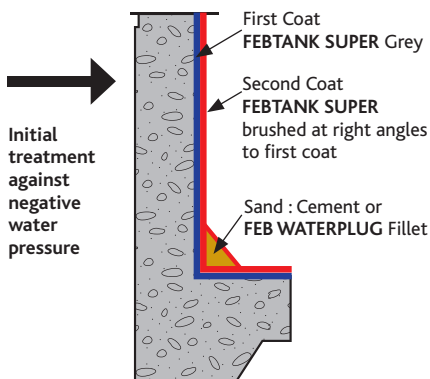
With this in mind the FEBTANK SUPER tanking system provides both specialist applicators and builders with a simple brush applied waterproof tanking system for basements, inspection pits, ponds and water retaining structures. As

with all surface applications preparation of substrates to receive the tanking system must be of the highest order as a tenacious bond is a pre requisite if the FEBTANK SUPER performs efficiently. So any paint or loose matter must be removed prior to installation, as this will inhibit the ability of the FEBTANK SUPER to withstand the levels of water pressure regularly encountered.

Probably the most problematic areas for water ingress is the point where the wall meets the floor and it is this area that needs special attention by providing a 'triangular fillet' at the floor to wall intersection to help provide a seamless transition for the FEBTANK SUPER from floor to wall.

FEBTANK SUPER comes in powder form and is mixed with water and applied to pre-dampened surfaces including brick, blockwork, stone and concrete by stiff brush or broom.

High-suction substrates require more dampening than dense substrates. However, make sure there is no freestanding water on floors. Any holes or voids should be repaired using mortar or FEB WATERPLUG where 'live' water is leaking via the joint, hole or void to be repaired.



The first coat of FEBTANK SUPER should be firmly applied onto the pre-dampened, prepared surface. Care must be taken not to spread the material too thinly.

To help ensure a total two coat coverage it is recommended that different colours of FEBTANK SUPER are used for the different coats normally grey for the first coat and white for the second.

This provides a visual indication should total coverage with the second coat not be achieved.

Allow at least overnight to cure before applying subsequent coats. Dampen the first coat and remove excess moisture. If the application is in poorly ventilated rooms, condensation may occur on the first coat. This condensation should be removed from the surface.

Apply the second coat at right angles to the first coat to ensure good covering.

Applications to floors should be protected with appropriate floor coverings or traditional screed.

In most cases, render can be applied 24 hours after application of the FEBTANK SUPER.

If application of finishing render is likely to be delayed for some time it is recommended that the FEBTANK SUPER is blinded with sand immediately after application to aid adhesion.

If plaster is to be used it must be ensured that cement based 'renovating plaster' is used. N.B Gypsum based plasters must not be used.

If 'Dry Lining' is to be undertaken, boards should not be fixed using gypsum 'dot and dab' adhesive, EVERBUILD DRY FIX is recommended for this type of installation. Under no circumstances use mechanicals fixings that will penetrate the tanking.

For installations involving 'running' water or severe hydrostatic pressure, refer to the Feb Technical Services for advice on specific application techniques.



Waterplug

Rapid Setting Water Stop Repair Compound

- Instantly stops active water leaks in concrete and masonry
- Expands on application to form an instant watertight seal
- Use on holes, joints and cracks
- Sets above or below water level
- Coverage, 1kg will fill 585cm³

Colour	Product Code	Pack Size	Box Qty
Grey	FBWATPLUG5	5KG	1



Waterplug

Product Description

FEB WATERPLUG, when mixed with clean water, provides a ready to use ultra rapid setting durable plugging mortar for active water leaks in concrete and masonry. The material expands as it cures to form a watertight seal with similar characteristics to concrete.

Typical Uses

FEB WATERPLUG is used to stop active water or seepage under pressure through joints, cracks and holes in concrete or masonry, where a normal mortar would be washed away and resin mortars would not bond. Areas of use include:

- As a seal for construction joints or floor joints prior to basement tanking with FEBTANK SUPER.
- For instant sewer connections and for sealing cracks and construction joints in reservoirs and other water retaining structures.
- For rapid anchoring of bolts, conduits, pipes, railings, sanitary equipment, etc.
- Joint filling, pointing between concrete segments in concrete and brick tunnels, sewage systems, pipes and mines.

Features & Benefits

- Ultra-rapid set, instant plugging of leaks - requires the addition of water only.
- Expands as it sets, ensuring a permanent watertight seal.
- Similar characteristics and compatible with concrete.
- Chloride-free - does not promote corrosion of the reinforcement.

Instructions for Use

Preparation of Substrate

Preferably, cracks or holes should be cut out to a minimum width and depth of 20mm, cutting the sides as square as is practical. Undercut if possible. Avoid leaving a V-section. Do not feather-edge. Flush out the hole or crack with water at high pressure in order to remove all loose particles and

dust. All surfaces must be dampened with clean water prior to application of FEB WATERPLUG.

Mixing

Mixing should only be done by hand.

Application

For plugging active leaks: Mix, in a suitable container, only sufficient material (0.5kg) that can be placed by hand in one application. Mix quickly. Do not over mix. Hold the material in a gloved hand until slight warmth is felt or setting occurs. Then press FEB WATERPLUG mortar firmly into the opening; do not remove the hand too quickly. If the opening is too big to be closed with 0.5kg of FEB WATERPLUG, work from the sides to the middle, following the above procedure. After stopping the active water, trim back.

For sealing cracks at the junction of floor and wall in an existing construction: Cut out the crack at least 20mm wide and deep, cutting back into the wall slightly. Flush away all cuttings and dirt. Force FEB WATERPLUG mortar into the prepared crack and smooth it out. Form a 45° cove or fillet at the junction of floor and wall of approximately 35-45 mm.

For sealing the junction between a concrete floor and a masonry wall in new construction: Form a rebate throughout the basement and subbasement rooms and pits by inserting a strip of wood 20mm x 20mm at the junction of vertical

masonry walls and the concrete floor slabs. The top edge of the strip should be laid true and level with finished concrete floors and left in place until fresh concrete has cured. Remove the wood strip previously inserted. Wash the groove with clean water from a hose pipe to remove debris. Fill the groove with FEB WATERPLUG mortar mixed to a stiff consistency; force or tamp it into place with a round nosed tool to form a cove between the floor and wall. Keep the FEB WATERPLUG mortar damp for 15minutes if no active water is present.

Refer to the Technical Datasheets for detailed instructions on other applications.

Curing

Final setting time, 2 – 4 minutes. Once the placed FEB WATERPLUG mortar has stiffened sufficiently, dampen with clean water and maintain in a damp condition for a minimum of 15 minutes.

Coverage

1kg of powder will fill approximately 585cm³ or a joint 20mm x 20mm x 1.45m.

Storage

All materials should be stored under cover, clear of the ground and stacked not more than 4 pails high. Protect the materials from all sources of moisture and frost.

Shelf Life

9 months when stored as directed.

Performance Data

Wet density	2.14g/cm ³
Chloride content	<0.1% w/w (nil)
Estimation (grouting)	Litres of material required (mixed) = $\frac{\text{width (mm)} \times \text{depth (mm)} \times \text{length (m)}}{1000}$
Shrinkage	Minimal (shrinkage compensated grade)
Compressive strength (N/mm ²)	30 mins: 13.8; 24hrs: 31; 7 days: 44; 28 days: 53
Flexural strength (N/mm ²)	30 mins: 2.7; 24hrs: 6.1; 7 days: 6.3; 28 days: 7.0
Tensile strength (N/mm ²)	28 days: 3.3



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Tile Adhesives & Grouts





Permaset

Waterproof Tile Adhesive

Complies with BS5980 Type 1, Class AA

- Interior or exterior use
- Suitable for shower flooring
- Decorative stone cladding adhesive
- Coverage, 4Kg per m² when applied at a constant solid bed depth of 6mm

Colour	Product Code	Pack Size	Box Qty
Grey	FBPERMGY20	20KG	1



Tile Adhesives & Grouts

Permaset

Product Description

FEB PERMASET WATERPROOF TILE ADHESIVE is normal setting (24 hour) thick or thin bed adhesive for bonding ceramic tiles to floors and most walls. Can be used internally and externally and bonds to most building substrates such as concrete, cement screeds and render, timber etc. Conforms to BS5980 as a Type 1 Class AA Adhesive; i.e. the adhesive is fully water resistant and suitable for continuous immersion (e.g. swimming pools).

Typical Uses

For fixing ceramic wall and floor tiles whenever rapid setting is required. Particularly for fixing ceramic floor tiles in areas which have to be opened to foot traffic within three hours of laying at normal temperatures.

Features & Benefits

- Sets hard within 1-2 hours at 20°C.
- Easy to use.
- Excellent grab and adhesion.
- For internal or external use.

Instructions for Use

Preparation of Substrate

Concrete/Screeds/Renderers/Unskimmed

Plasterboard/Blockwork – Allow fresh concrete etc to dry for at least 4 weeks before tiling. Ensure floors are free from rising damp. Prime surfaces with FEBOND PVA diluted 4 parts water to 1 part FEBOND PVA and allow to dry.

Timber Floors – Suitable for interior floors only. Ensure adequate ventilation beneath floors. Cover wooden floors with moisture resistant exterior grade (marine) plywood, which must be at least 12mm thick. Secure with screws, not nails, at 300mm centres. Prime with FEBOND PVA diluted 3 parts water to 1 part FEBOND PVA and allow to dry. In all cases, this adhesive must be mixed with neat FEBFLOR LATEX LIQUID to give required adhesion and flexibility for tiling on wood. Note. FEBFLOR LATEX LIQUID may retard the set.

Softwood tongue and groove boarding – Boards must be screwed (not nailed) down to joists at 300mm centres and surfaces sealed with FEBOND PVA diluted 3 parts water to 1 part FEBOND PVA and allowed to dry. Adhesive must be mixed to a slump free mortar with neat FEBOND SBR to ensure long term flexibility. Note: this will slightly retard the set.

Existing tiling – Ensure tiles are securely bonded to wall or floor. Roughen surface of glazed tiles with sander. Apply a bonding coat of neat FEBOND PVA. Mix FEB PERMASET WALL & FLOOR TILE ADHESIVE with neat FEBFLOR LATEX LIQUID. Apply mixed adhesive whilst bonding coat is still tacky.

Application

All surfaces should be clean, dry and free of dust and loose material before commencing. Refer to above for specific surface preparation. Always add powder to water. Mix approximately three parts by volume powder to 1 part by volume water or latex liquid (approx. 4 parts powder to 1 part water by weight) and mix to a slump free mortar. Spread adhesive to a depth of 6mm and comb to 3mm to leave a solid bed with 3mm ribs.

Secure tiles with a slight twist action to ensure no voids remain. Tiles should be fixed within 20 min of spreading depending on absorbency of substrate and temperature. Lightly touch the adhesive periodically and if a skin has formed, remove the adhesive and apply a new layer. It is good practice to periodically remove a tile and check that the adhesive covers a minimum of 75% of the tile. **Never** add further water once the adhesive has started to go off. This will destroy the bond strength.

All surplus adhesive must be removed whilst the adhesive is still wet using a dampened cloth or sponge, particularly along the grout lines.

Coverage

Approximately 4kg/m² when applied as directed.

Storage

Store in cool, dry conditions for Portland Cement. Protect from extremes of temperature.

Shelf Life

9 months from manufacture when stored in a sealed container and as recommended.

Performance Data

Specification	BS5980 Type 1 Class AA
Pot Life	2-3 hours
Drying Time	Initial Set: 8-12 hours; Final 48hrs
Cleaning	Clean tools in water after use. Wash hands immediately after using this product.



Fastset

Quick Setting Wall & Floor Tile Adhesive

Complies with BS5980 Type 1, Class AA.

- Interior and exterior use
- Water resistant
- Thin and thick bed tile fixing
- Rapid setting, fully cures within 1 - 2 hours at 20°C
- Coverage, 4Kg per m² when applied to a uniform depth of 6mm
- Working life, 30-45 minutes after mixing

Colour	Product Code	Pack Size	Box Qty
Grey	FBFASTSET10	10KG	1
	FBFASTSET20	20KG	1



Tile Adhesives & Grouts

Product Description

FEB FASTSET WALL & FLOOR TILE ADHESIVE is a fast setting adhesive for bonding ceramic tiles to floors and most walls where same day fixing and grouting is required. Can be used internally and externally and bonds to most building substrates such as concrete, cement screeds and render, timber, existing ceramic tiles, dense block work and unskimmed plasterboard. Conforms to BS5980 as a Type 1 Class AA Adhesive; i.e. the adhesive is fully water-resistant.

Typical Uses

For fixing ceramic wall and floor tiles whenever rapid setting is required. Particularly for fixing ceramic floor tiles in areas which have to be opened to foot traffic within three hours of laying at normal temperatures.

Features & Benefits

- Sets hard within 1-2 hours at 20°C.
- Easy to use.
- Excellent grab and adhesion.
- For internal or external use.

Instructions for Use

Preparation of Substrate

Concrete/Screeds/Renderers/Unskimmed Plasterboard/Blockwork – Allow fresh concrete etc to dry for at least 4 weeks before tiling. Ensure floors are free from rising damp. Prime surfaces with FEBOND PVA diluted 4 parts water to 1 part FEBOND PVA and allow to dry.

Timber Floors – Suitable for interior floors only. Ensure adequate ventilation beneath floors. Cover wooden floors with moisture resistant exterior grade (marine) plywood, which must be at least 12mm thick. Secure with screws, not nails, at 300mm centres. Prime with FEBOND PVA diluted 3 parts water to 1 part FEBOND PVA and allow to dry. In all cases, this adhesive must be mixed with neat FEBFLOR LATEX LIQUID to give required adhesion and flexibility for tiling on wood. Note. FEBFLOR LATEX LIQUID may retard the set.

Softwood tongue and groove boarding – Boards must be screwed (not nailed) down to joists at 300mm centres and surfaces sealed with FEBOND PVA diluted 3 parts water to 1 part FEBOND PVA and allowed to dry. Adhesive must be mixed to a slump free mortar with neat FEBOND SBR to ensure long term flexibility. Note: this will slightly retard the set.

Existing tiling – Ensure tiles are securely bonded to wall or floor. Roughen surface of glazed tiles with sander. Apply a bonding coat of neat FEBOND PVA. Mix FEB FASTSET WALL & FLOOR TILE ADHESIVE with neat FEBFLOR LATEX LIQUID. Apply mixed adhesive whilst bonding coat is still tacky.

Application

All surfaces should be clean, dry and free of dust and loose material before commencing. Refer to above for specific surface preparation. Always add powder to water. Mix approximately three parts by volume powder to 1 part by volume water or latex liquid (approx. 4 parts powder to 1 part water by weight) and mix to a slump free mortar. Spread adhesive to a depth of 6mm and comb to 3mm to leave a solid bed with 3mm ribs.

Secure tiles with a slight twist action to ensure no voids remain. Tiles should be fixed within 20 min of spreading depending on absorbency of substrate and temperature. Lightly touch the adhesive periodically and if a skin has formed, remove the adhesive and apply a new layer. It is good practice to periodically remove a tile and check that the adhesive covers a minimum of 75% of the tile. **Never** add further water once the adhesive has started to go off. This will destroy the bond strength.

All surplus adhesive must be removed whilst the adhesive is still wet using a dampened cloth or sponge, particularly along the grout lines.

Coverage

Approximately 4kg/m² when applied as directed.

Storage

Store in cool, dry conditions for Portland Cement. Protect from extremes of temperature.

Shelf Life

9 months from manufacture when stored in a sealed container and as recommended.

Performance Data

Pot Life @ 20°C	20-30 mins
Set Time @ 20°C	1-2 hours
Specification	BS5980 Type 1 Class AA



Fastset Plus

Quick Setting Flexible Wall & Floor Tile Adhesive

Complies with BS5980 Type 1, Class AA.

- Interior and exterior use
- Water resistant
- Added latex powder for improved flexibility
- Rapid setting, fully cures within 3 - 4 hours at 20°C
- Coverage, 4Kg per m² when applied to a uniform depth of 6mm
- Working life, 30-45 minutes after mixing

Colour	Product Code	Pack Size	Box Qty
Grey	FBFASTPLUS20	20KG	1



Tile Adhesives & Grouts

Fastset Plus

Product Description

FEB FASTSET PLUS WALL & FLOOR TILE ADHESIVE is a rapid setting ceramic tile adhesive with added latex powder for improved flexibility. FEB FASTSET PLUS WALL & FLOOR TILE ADHESIVE is used for bonding ceramic tiles to prepared floors and walls without the need for a separate flexible additive. Can be used internally and externally and bonds to most building substrates such as concrete, cement screeds and render, timber, existing ceramic tiles, dense block work and unskimmed plasterboard. Conforms to BS5980 as a Type 1 Class AA Adhesive; i.e. the adhesive is fully water-resistant.

Typical Uses

For fixing ceramic wall and floor tiles whenever rapid setting is required. Particularly for fixing ceramic floor tiles in areas which have to be opened to foot traffic within four hours of laying at normal temperatures.

Features & Benefits

- Sets hard within three to four hours at 20°C.
- Easy to use.
- Excellent grab and adhesion.
- For internal or external use.

Instructions for Use

Preparation of Substrate

Concrete/Screeds/Renders/Unskimmed Plasterboard/Blockwork – Allow fresh concrete etc to dry for at least 4 weeks before tiling. Ensure floors are free from rising damp. Prime surfaces with FEBOND PVA diluted 4 parts water to 1 part FEBOND PVA and allow to dry.

Timber Floors – Suitable for interior timber floors only. Ensure adequate ventilation beneath floors. Cover wooden floors with moisture resistant exterior grade (marine) plywood, which must be at least 12mm thick. Secure with screws, not nails, at 300mm centres. Prime with FEBOND PVA diluted 3 parts water to 1 part FEBOND PVA and allow to dry.

Existing tiling – Ensure tiles are securely bonded to wall or floor. Roughen surface of glazed tiles with sander. Apply a bonding coat of neat FEBOND PVA. Apply mixed adhesive whilst bonding coat is still tacky.

Application

All surfaces should be clean, dry and free of dust and loose material before commencing. Refer to above for specific surface preparation. Always add powder to water. Mix approximately three parts by volume powder to 1 part by volume water (approx. 4 parts powder to 1 part water by weight) and mix to a slump free mortar. Spread adhesive to a depth of 6mm and comb to 3mm to leave a solid bed with 3mm ribs. Secure tiles with a slight twist action to ensure no voids remain. Tiles should be fixed within 20 min of spreading depending on absorbency of substrate and temperature.

Lightly touch the adhesive periodically and if a skin has formed, remove the adhesive and apply a new layer. It is good practice to periodically remove a tile and check that the adhesive covers a minimum of 75% of the tile. **Never** add further water once the adhesive has started to go off. This will destroy the bond strength.

All surplus adhesive must be removed whilst the adhesive is still wet using a dampened cloth or sponge, particularly along the grout lines.

Coverage

Approximately 4kg/m² when applied as directed.

Storage

Store in cool, dry conditions for Portland Cement. Protect from extremes of temperature.

Shelf Life

9 months from manufacture when stored in a sealed container and as recommended.

Performance Data

Pot Life @ 20°C	20-30 mins
Set Time @ 20°C	3-4 hours
Specification	BS5980 Type 1 Class AA



Gapfil

Wall and Floor Tile Grout

- Water and shrink resistant
- Easy to apply and finish
- Designed for joints up to 15mm wide
- Coverage, 1kg will grout 2m² of standard 150mm² tiles, with 3mm wide joints

Colour	Product Code	Pack Size	Box Qty
Grey	FBGAPFIL5	5KG	1
	FBGAPFIL10	10KG	1
	FBGAPFIL20	20KG	1



Tile Adhesives & Grouts

Product Description

FEB GAPFIL WALL & FLOOR TILE GROUT is a cement based water and shrink resistant floor and wall tile grout that can be used internally and externally on joints up to 15mm wide.

Typical Uses

As a grout between ceramic tiles for both wall and floor tile applications.

Features & Benefits

- May be trafficked after three hours.
- Waterproof.
- For internal or external use.

Instructions for Use

Preparation of Substrate

Ensure that the area to be grouted is clean, dry and free from loose adhesive before grouting. ALWAYS CHECK THAT THE ADHESIVE IS DRY BEFORE COMMENCING.

Tiling Sand/Cement Render/Screed/Plaster/Plasterboard – Mix grout with water as detailed below. Leave at least 24 hours before grouting, except when using FEB FASTSET, where grouting may be carried out 2-4 hours after fixing, depending on temperature.

Tiling Impervious Surfaces (Asphalt/Existing Tiling Etc) – Mix grout with water and leave at least 5 days before grouting, except when using FEB FASTSET, where grouting may be carried out 2-4 hours after fixing, depending on temperature.

Tiling Surfaces Subject To Movement (Wood Etc) – Mix grout with FEBOND SBR diluted 1:1 with water. Leave at least 24 hours before grouting, except when using FEB FASTSET, where grouting may be carried out 2-4 hours after fixing, depending on temperature.

Tiling In Areas Subject To Intermittent / Constant Water Immersion – Mix grout with FEBOND SBR diluted 1:1 with water. Leave at least 24 hours after tiling before grouting, except when using FEB FASTSET where grouting may be carried out 2-4 hours after fixing, depending on temperature. Swimming pools should not be filled for at least three weeks after grouting.

Application

Always add powder to water. Mix approximately 4 parts by volume powder to 1 part by volume water and mix to a smooth paste. The grout is usable for approximately 1-2 hours at 20°C. Allow to stand for 15 mins, re-stir then work well into joints using a squeegee. Do not leave any voids. Remove excess grout as you proceed. Allow approximately 15 minutes drying time after grouting before removing excess with a damp cloth. Polish the tiles with a clean, dry cloth when the grout is sufficiently hard. May be walked on after approximately 3 hours at 20°C.

Performance Data

Appearance	Fine grey powder
Application Temp	+5°C to 35°C
Service Temp	-30 to 100°C
Open time/Pot life	30-40 mins @ 20°C
Setting time	3 - 4 hours (hard in 24 hours)
Joint width	up to 15mm (minimum 3mm)

Coverage

Tile Size	Joint Width	Req. Amount (kg/m ²)
200 x 100 x 9mm	6mm	1.4
150 x 150 x 9mm	6mm	1.2
150 x 150 x 9mm	3mm	0.5
200 x 100 x 9mm	3mm	0.7

Storage

Store in cool, dry conditions for Portland Cement. Protect from extremes of temperature.

Shelf Life

9 months from manufacture when stored in a sealed container and as recommended.

Gapfil



Unifil

Interior & Exterior Grout

- Ceramic wall tile grout
- Water resistant
- Resistant to cracking in joints up to 3mm wide
- Suitable for exterior applications, as well as interior use

Colour	Product Code	Pack Size	Box Qty
White	FBUNI1	1.5KG	4
	FBUNI3	3KG	4



Tile Adhesives & Grouts

Unifil

Product Description

FEB UNIFIL INTERIOR & EXTERIOR GROUT is a cement based powdered grouting compound with added PVA to promote adhesion. Simply mix with water to give a pure white paste. Can be used on wall joints up to 3mm. Suitable for use in kitchens, bathrooms and shower areas. May be used internally and externally.

Typical Uses

As a grout between ceramic tiles in bathroom and kitchen areas.

Features and Benefits

- Dries white.
- Waterproof.
- For internal or external use.

Instructions for Use

Preparation of Substrate

Ensure that the area to be grouted is clean, dry and free from loose adhesive before grouting. ALWAYS CHECK THAT THE ADHESIVE IS DRY BEFORE COMMENCING.

Tiling Sand/Cement Render/Screen/Plaster/Plasterboard – Mix grout with water as detailed below. Leave at least 24 hours before grouting.

Tiling Impervious Surfaces (Asphalt/Existing Tiling Etc) – Mix grout with water and leave at least 5 days before grouting.

Tiling Surfaces Subject To Movement (Wood Etc) – Mix grout with FEBOND SBR diluted 1:1 with water. Leave at least 24 hours before grouting.

Tiling In Areas Subject To Intermittent / Constant Water Immersion – Mix grout with FEBOND SBR diluted 1:1 with water. Leave at least 24 hours before grouting.

Application

All surfaces must be clean, dry and free from contaminants such as adhesive, paint etc. Tile must be left for at least 24hrs (3 days on non porous surfaces) for the adhesive to dry before grouting. Mix approximately 2 parts powder to 1 part water. Mix to a smooth lump free paste. Allow to stand 10 minutes before grouting, then re-stir.

Apply by cloth or squeegee. Push grout well into joints so no voids remain behind. Remove excess grout with a damp cloth before it dries.

Protect all grouted areas from running water and frost until the grout is completely dry.

Coverage

Tile Size	Joint Width	Req. Amount (kg/m ²)
150 x 150 x 9mm	3mm	0.6
200 x 100 x 9mm	3mm	0.7

Storage

Store in cool, dry conditions for Portland Cement. Protect from extremes of temperature.

Shelf Life

12 months from manufacture when stored in a sealed container and as recommended.

Performance Data

Appearance	Fine white powder
Application Temp	+5°C to 35°C
Service Temp	-30 to 100°C
Open time/Pot life	60 mins @ 20°C
Setting time	3 - 4 hours (hard in 24 hours)
Joint width	maximum 3mm (up to 12mm max when mixed with FEBOND SBR (diluted 1:1 with water))
Exterior Use	Mix with FEBOND SBR (diluted 1:1 with water) to give maximum durability



Ceramix

Ceramic Non-Slip Wall Tile Adhesive

Conforms to BS5980 as a Type 2, Class B adhesive and EN12004 Type D1T

- Ready mixed
- Easy to use
- Strong adhesion
- For use in bathrooms, showers and kitchens

Colour	Product Code	Pack Size	Box Qty
Off White/Buff	FBCERA3	3.5KG	4
	FBCERA7	7.5KG	1
	FBCERA15	15KG	1



Tile Adhesives & Grouts

Product Description

FEB CERAMIX CERAMIC NON SLIP WALL TILE ADHESIVE is an acrylic based formula for extra slip resistance and grab that is designed for general-purpose use in bathroom and kitchen areas. May be used in domestic showers when used in conjunction with FEB UNIFIL INTERIOR & EXTERIOR GROUT. Conforms to BS5980 as a Type 2, Class B adhesive and EN12004 Type D1T. FEB tile adhesives are formulated using only top quality raw materials and are designed to provide the correct product for fixing ceramic wall tiles and mosaics in most common applications.

Typical Uses

- Fixing of ceramic wall tiles in bathrooms, kitchens and toilets. Must not be used externally.
- Suitable substrates: plaster, cement renderings, bricks, soundly painted surfaces, plywood, blockboard.
- Note: FEB CERAMIX is **not** suitable for use in areas subject to standing water. For fixing wall tiles internally in areas subject to prolonged wet conditions or condensation, use FEB WETMIX.
- Externally and for swimming pools and surrounds, use FEB PERMASET.
- When fixing ceramic tiles to floors, use FEB PERMASET or FEB FASTSET/FASTSET PLUS.

Features & Benefits

- Non-slip/enhanced grip.
- Ready mixed.
- Easy to use.
- Strong adhesion.
- Suitable for domestic showers.
- Multi purpose.

Instructions for Use

Surfaces to be tiled must be clean, dry and sound. Porous surfaces, including plaster, must be primed with FEBOND PVA diluted 1 to 4 with water and allowed to dry before tiling. Allow new plaster to dry at least one month before tiling. Apply adhesive to wall at a depth of 3-6mm (no less than 3mm, no greater than 6mm) combing out an area no greater than 1m² at a time. In dry situations, use a suitable notched trowel across the surface of the adhesive before placing the tiles into position and securing with a slight twist action to remove air voids.

In areas subject to wet conditions, do not use a notched trowel. Bed the tiles directly into the surface of the adhesive and again, secure with a slight twist action. In both situations, it is good practice to periodically remove a tile and check that at least 75% of the tile is covered in adhesive.

If this is not the case, apply fresh adhesive and reposition. All surplus adhesive must be removed whilst adhesive is still wet using a dampened cloth or sponge, particularly along grout lines.

Coverage

Approximately 1.5kg/m² (6mm notched trowel) to 2.3kg/m² (solid bed).

Storage

Store in cool dry conditions – PROTECT FROM FROST.

Shelf Life

12 months from manufacture when stored in a sealed container and as recommended.

Performance Data

Appearance	Off white/buff paste
Application Temp	+5°C to 35°C
Open time	15-25 mins. Do not apply more adhesive than can be tiled in 20 minutes.
Setting time	Allow to dry for 24 hours before grouting (72 hours if tiling on non-porous surfaces). Avoid wetting tiles for 48 hours. Showers should not be used for at least 7 days after grouting has been completed.

Ceramix



Wetmix

Waterproof Ceramic Wall Tile Adhesive

Conforms to BS5980 as a Type 2, Class AA adhesive and EN12004 Type D2T

- Ready mixed
- Non-slip
- Easy to use
- Strong adhesion
- Ideal for heavy duty applications in wet areas
- For use in bathrooms, showers and kitchens

Colour	Product Code	Pack Size	Box Qty
Off White/Buff	FBWETMIX3	3.5KG	4
	FBWETMIX7	7.5KG	1
	FBWETMIX15	15KG	1



Tile Adhesives & Grouts

Wetmix

Product Description

FEB WETMIX WATERPROOF CERAMIC WALL TILE ADHESIVE is a premium grade tile adhesive that can be used in areas subject to prolonged/permanent wet conditions and in areas of high humidity and condensation. Conforms to BS5980 as a Type 2, Class AA adhesive and EN12004 Type D2T.

FEB tile adhesives are formulated using only top quality raw materials and are designed to provide the correct product for fixing ceramic wall tiles and mosaics in most common applications.

Typical Uses

Fixing ceramic wall tiles to showers, toilet areas, bathrooms and areas exposed to condensation - i.e. to any area subject to wet conditions (but excluding pools and external use). Can also be used for general fixing of ceramic wall tiles and expanded polystyrene tiles. Suitable substrates are plaster, cement render, glazed tiles or bricks, sound painted surfaces, plywood and blockboard or asbestos sheet.

NOTE: Externally and for swimming pools and surrounds, use FEB PERMASET. When fixing ceramic tiles to floors, use FEB PERMASET or FEB FASTSET/FASTSET PLUS.

Features and Benefits

- Non-slip.
- Ready mixed.
- Economical and easy to use.
- Rapid gain of water resistance.
- Suitable for showers and areas exposed to water or condensation.
- Good initial grab and strong adhesion.
- Low odour.

Instructions for Use

Surfaces to be tiled must be clean, dry and sound. Porous surfaces, including plaster, must be primed with FEBOND PVA diluted 1 to 4 with water and allowed to dry before tiling. Allow new plaster to dry at least one month before tiling. Apply adhesive to wall at a depth of 3-6mm (no less than 3mm, no greater than 6mm) combing out an area no greater than 1m² at a time. In dry situations, use a suitable notched trowel across the surface of the adhesive before placing the tiles into position and securing with a slight twist action to remove air voids.

In areas subject to wet conditions, do not use a notched trowel. Bed the tiles directly into the surface of the adhesive and again, secure with a slight twist action. In both situations, it is good practice to periodically remove a tile and check that at least 75% of the tile is covered in adhesive.

If this is not the case, apply fresh adhesive and reposition. All surplus adhesive must be removed whilst adhesive is still wet using a dampened cloth or sponge, particularly along grout lines.

Coverage

Approximately 1.5kg/m² (6mm notched trowel) to 2.3kg/m² (solid bed).

Storage

Store in cool dry conditions – PROTECT FROM FROST.

Shelf Life

12 months from manufacture when stored in a sealed container and as recommended.

Performance Data

Appearance	Off white/buff paste
Application Temp	+5°C to 35°C
Specification	15-25 mins. Do not apply more adhesive than can be tiled in 20 minutes.
Setting time	Allow to dry for 24 hours before grouting (72 hours if tiling on non-porous surfaces). Avoid wetting tiles for 48 hours. Showers should not be used for at least 7 days after grouting has been completed.



BLOCK & PAVING SEALER	50
FEBASILICON	51

Surface Protectors





Block & Paving Sealer

Forms a Tough, Clear Seal for Block Paving, Natural Stone, Paving Flags & Concrete Floors

- Resin based
- Resists oil, fuel and fungal and weed growth
- Protects against weather damage
- Seals & binds jointing sand
- Resists weed growth

Colour	Product Code	Pack Size	Box Qty
Clear	FBBLOCK5	5LTR	4
	FBBLOCK25	25LTR	1



Surface Protectors

Block & Paving Sealer

Product Description

FEB BLOCK AND PAVING SEALER is a Block Paving Seal & Joint Sand Stabiliser based on a clear solvent based acrylic coating designed to bind jointing sand and form a durable seal over block paving and other mineral pavers/flags. FEB BLOCK AND PAVING SEALER penetrates deeply into pavers and jointing sand and then cures by solvent evaporation to give a long lasting seal which is resistant to sunlight, water, oil and Petrol. FEB BLOCK AND PAVING SEALER contains a fungicide to resist the growth of fungus, mould and weeds.

Typical Uses

To seal and protect block paving.

Features & Benefits

- Deeply penetrating – deepens/enhances natural colour of block paving.
- Colourless, long lasting.
- Protects surface from discolouration due to pollution.
- Helps to reduce efflorescence.
- Water permeable coating - allows paving to "breathe" and prevents ponding of rainwater.

Instructions for use

Preparation of Substrate

Jointing sand should comply with BS6717 and BS6677 or national equivalent. Ensure the paving surfaces to be treated are clean and free from any mould or fungal growth. If oil stains are present, remove with detergent and hot water. Ensure cement composite pavers are thoroughly degreased and free from release agents which will affect penetration. If mould and fungal growth are present, clean surfaces with EVERBUILD MOSS-AWAY as directed. All artificial stone (cement based) and all block pavers must be left for three months minimum after placing before over coating with this product. This will allow salts to leach out which otherwise may cause unsightly white patches appearing beneath the sealer, especially

when the patio is wet. Application to a wet or water saturated surface will give poor adhesion.

Application

NOTE: DO NOT APPLY BELOW +5°C. Always test an inconspicuous area prior to full scale application. Apply FEB BLOCK AND PAVING SEALER by brush, roller or foam neoprene squeegee from a suitable container or tray. NEVER pour this product directly onto surface. Work well into joints for maximum penetration. DO NOT LEAVE SURPLUS MATERIAL ON THE SURFACE. Ensure an even and thorough coverage, especially on textured flags/pavers where "ponding" of the product must be avoided. An uneven coating will give a blotchy/white appearance to areas where excess product has been allowed to settle and dry. These areas will look worse in wet conditions. Two coats are normally recommended, allowing 3-4 hours minimum between coats.

Maintenance

Areas treated with this product can be cleaned with warm water and detergent or EVERBUILD MOSS-AWAY. Do not use acid based cleaners, as these will remove/discolour the product. Avoid using power washes.

Important Notes

FEB BLOCK AND PAVING SEALER will only work where it can penetrate into the surface. Do not apply to non-porous surfaces. Do not apply this product to painted surfaces or surfaces that have

previously been treated with stearate or silicone based water seals.

ALL surfaces, especially certain natural stones will darken slightly when treated. ALWAYS TEST A SMALL AREA FOR COMPATIBILITY PRIOR TO FULL APPLICATION.

Product is slip resistant when dry. Obviously, water will affect this property adversely.

Do not apply this product if rain is imminent (within 5 hours at 20°C).

Avoid spillage into surrounding vegetation and keep all children and animals away from area until product has fully dried.

Coverage

Coverage will vary depending on the porosity of the substrate. As a quick guide, coverage will be approximately 2.2 sq. meters per litre depending on porosity of blocks and joint width.

Storage

Keep away from food. Store in unopened containers in cool, dry conditions away from sources of ignition and heat.

Shelf Life

Up to two years when stored as recommended.

Performance Data

Composition	Acrylic resin in solvent
Specific Gravity @ 20°C	0.79
Flashpoint	32°C – flammable liquid
Cleaning	Clean all equipment and brushes immediately after use with white spirit

Febsilicon

Exterior Waterproofer

Colourless High Performance Silicone
Water Repellent

- Deep penetrating for long term protection against water & damp
- Seals & protects brick, natural stone, limestone, cement, concrete, wood, plaster plus many other materials
- 10 year life expectancy
- Allows surface to breathe
- Can be applied by spray, brush or roller

Colour	Product Code	Pack Size	Box Qty
Clear	FBSIL5	5LTR	4
	FBSIL25	25LTR	1



Surface Protectors

Product Description

FEBASILICON is an external surface applied water-resistant compound for brickwork and certain types of natural and artificial stonework. FEBASILICON penetrates deeply beneath the surface to deposit a silicone barrier in the capillary channels, substantially reducing rain penetration and helping to keep the surface clean. FEBASILICON conforms to the specification of BS 6477, Groups 1 and 4.

Typical Uses

To substantially reduce the water permeability of external brickwork, weathered asbestos sheeting and certain types of artificial stonework, suitable for application to vertical surfaces only.

Features & Benefits

- Deeply penetrating, water repellent.
- Colourless, long lasting.
- Protects surface from discolouration due to pollution.
- Helps to reduce efflorescence.
- Economical and easy to use.
- When applied by brush or spray to surfaces of natural stonework, brickwork, certain types of concrete block, artificial stonework and cement paint, it penetrates deeply beneath the surface to line the pores with a thin water repellent coating without significantly changing the appearance or affecting the breathing property of the wall. This substantially reduces rain and damp penetration, protects the surface from discolouration and weathering and aids in preventing efflorescence and spalling of the surface from frost attack. In industrial areas, the sealing of masonry with FEBASILICON protects the surface from attack by the acidified atmosphere and aids in preventing discolouration by smoke.

Effect on Thermal Insulation: Loss of heat through wet brickwork, etc., is one and half times greater than when it is dry. Prevention of rain and damp penetration with FEBASILICON therefore aids in preserving the heat insulating properties of the wall.

Effect on Masonry: The application of FEBASILICON does not significantly change, darken or form a sheen on the surface treated.

Instructions for use

Preparation of Substrate

The surface to be treated should be dry and free from loose matter. Defective joints in brick and stonework should be re-pointed. It is not necessary to treat hair cracks, but large cracks should be made good and allowed to dry before treatment. Efflorescence should, as far as possible, be removed by brushing the surface of the re-pointed areas.

Application

Stir before use. Apply by brush or low pressure spray in one coat, in conditions of adequate ventilation. The FEBASILICON is flooded on to the surface so that a run down of approximately 300mm is obtained.

Coverage

Coverage will vary according to the porosity of the surface treated and will be from 8m² per litre on hard brickwork to 3m²/ltr on highly porous surfaces (the latter may require two coats).

Storage

Keep away from food. Store in unopened containers in cool, dry conditions away from sources of ignition and heat.

Shelf Life

Up to two years when stored as recommended.

Performance Data

Composition

Containing the optimum concentration of silicone resins with hydrocarbon solvents. The efficiency of FEBASILICON as a colourless permeability reducing compound is further improved by the addition of a dispersing agent ensuring maximum depth of penetration and rapid formation of a water repellent surface.

Specific Gravity @ 20°C	0.79
Flashpoint	32°C
Cleaning	Clean all equipment and brushes immediately after use with white spirit

Geo-Fix[®]

Paving Jointing Compound

USE ON PAVING, FLAGS, SLABS, COBBLES & STONE SETTS



BEWARE OF IMITATIONS
Geo-Fix is the original and
best Jointing Compound
ACCEPT NO SUBSTITUTE



Easier, Faster & Better than cement based mortar...

- Simply brush into joints and compact
- Ready to use – no mixing
- Cement free – non staining
- Sets hard, won't crack or wash out
- Resists weed and plant growth
- Totally weatherproof – unaffected by frost
- For all joints of 5mm wide and over
- Water permeable, allows water escape

Colour	Product Code	Pack Size	Box Qty
Buff	GEOFIX10BF	10KG	1
Grey	GEOFIX10GY	10KG	1
Buff	GEOFIX20BF	20KG	1
Grey	GEOFIX20GY	20KG	1

✓ **NO CEMENT** ✓ **NO WATER** ✓ **NO MESS**

NO. 1 ROOF SEAL	54
BLACK BITUMEN PAINT	55
BITUMEN ROOF REPAIR MASTIC	56
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SOLAR REFLECTIVE ROOF COAT	63

Aquaseal Waterproofing Products



No. 1 Roof Seal

One Coat Flexible Acrylic Roof Seal

- All weather application, instant waterproofer for use on flat roofs, corrugated sheets, gutters, flashings, brickwork and slates
- Can be applied in wet conditions
- Can be applied to felt, bitumens and most roofing substrates
- No primer required
- Crack bridging and flexible
- Fibre reinforced
- Coverage, approximately 1-2kg/m² per litre

Colour	Product Code	Pack Size	Box Qty
Grey	FBAQACRYL5	5KG	4
	FBAQACRYL20	20KG	1



Aquaseal Waterproofing Products

No. 1 Roof Seal

Product Description

FEB AQUASEAL NO.1 ACRYLIC ROOF SEAL is a solvent based, polymer waterproof coating formulated with added fibres for enhanced crack bridging and flexibility. Suitable for emergency repair and maintenance work on most types of roofs: including slate, corrugated, felt etc. FEB AQUASEAL NO.1 cures to form a seamless flexible membrane that accepts the natural movement of the structure.

Typical Uses

- Waterproof coating of roofs – pitched and flat.
- Gutters.
- Chimney stacks/Pipes.
- Metal surfaces.

Features & Benefits

- Single coat application.
- Instantly waterproof.
- Crack bridging and flexible (500% elongation).
- Good resistance against weather influences, mineral acids (max. 10% in water).
- No reinforcing scrim required.
- Does not contain bituminous products.
- May be applied even on damp surfaces.

Instructions for Use

Preparation of Substrate

Surfaces must be sound, clean and free from loose debris, rust, grease and free-standing water.

Algae and lichens should be completely removed using EVERBUILD MOSS-AWAY as directed, before proceeding. Allow porous areas to dry before application. Porous areas of loose material and non-bituminous surfaces should be primed with FEB AQUASEAL FLASHING & ROOF PRIMER. Always remove loose chippings.

After cleaning, FEB AQUASEAL NO.1 can be applied directly on bituminous substrates, hard PVC, polyester, zinc, aluminium, glass, tiles, slates, lead

work, concrete, brickwork, corrugated sheets and wood.

Application

Never apply to polystyrene insulation or onto new concrete. Porous, friable and non bituminous materials (e.g. concrete, stone, wood) must first be dried and pre-treated with a coat of AQUASEAL FLASHING & ROOF PRIMER. Apply at a rate of 1 – 2 m² per kg per coat, depending on surface porosity and thickness of application, by brush or squeegee, to a minimum wet film thickness of 1mm, smoothing the material across the cracks and in one direction to give a uniform appearance. Re-coatable when fully cured, after 3 – 14 days depending upon temperature, humidity and thickness of the application AQUASEAL NO.1 is an effective waterproofer immediately after application.

Coverage

Approximately 1 – 2m² per kg per coat, depending on surface porosity and thickness of application.

Storage

Store in cool, dry and frost free conditions in manufacturer's unopened containers.

Shelf Life

12 months when stored as recommended in unopened containers.

Performance Data

Finish	Satin gloss
Solids content (ATSM,D1644/a)	60-63% in solids – FEB AQUASEAL NO.1 contains minimum 1.1 weight % synthetic fibres
Density (ATSM, D1475, 20 c)	1.05g/cm
Coat thickness	About 894 micron wet = about 472 micron dry
Flash point (DIN53213)	41°C, flammable

Black Bitumen Paint

Brush Applied Protective Coating For Metal, Concrete and Brickwork

- Protects gutters, downpipes & drains
- Long lasting & economical
- Coverage, 5-10m² per litre, depending upon texture & porosity

Colour	Product Code	Pack Size	Box Qty
Black	FBAQBTPNT1	1LTR	12
	FBAQBTPNT2	2.5LTR	6
	FBAQBTPNT5	5LTR	4
	FBAQBTPNT25	25LTR	1



Aquaseal Waterproofing Products

Product Description

FEB AQUASEAL BLACK BITUMEN PAINT is a general purpose black bitumen paint suitable for brush application.

Typical Uses

FEB AQUASEAL BLACK BITUMEN PAINT can be applied to most substrates, including iron and steel structures, metal fabrications, castings, asbestos cement sheeting, and structural concrete. NOTE FEB AQUASEAL BLACK BITUMEN PAINT is **NOT** suitable for use in fish ponds.

Features & Benefits

- Simple brush application.
- Rapid drying.

Instructions for Use

Preparation of Substrate

New surfaces must be cleaned to remove all traces of grease, oil and other foreign matter. All mill scale and any rust that has formed must be removed prior to painting. Where previous paint is firmly adhering and sound, it need not be removed. All loose flaking paint, scale, rust, dirt, grease etc., should be removed so that the surface is completely free from loose matter. On surfaces where all existing rust cannot be removed and where long term protection is required, use a fast drying red lead primer, zinc phosphate or other rust inhibitive primer in accordance with the manufacturer's instructions, and ensure this is dry before proceeding with the treatment. On clean, rust free surfaces where priming is required, apply one coat of FEB AQUASEAL FLASHING AND ROOF PRIMER by brush and allow to dry, under normal ambient conditions, for 20 - 40 minutes. Porous/ friable surfaces should also be primed with FEB AQUASEAL FLASHING AND ROOF PRIMER or a coat of FEB AQUASEAL BLACK BITUMEN PAINT diluted with 20% white spirits. FEB AQUASEAL BLACK BITUMEN PAINT can also be sprayed or dipped; for dipping it can be thinned if necessary using white spirit.

Application

A minimum of two coats is recommended to eliminate pinholes and inadequate coverage of high spots. Apply second coat after the first has dried.

Coverage

The generally recommended coverage rate for FEB AQUASEAL BLACK BITUMEN PAINT is:

Mild Steel 10m²/ltr per coat

Concrete (dependent on porosity) 5m²/ltr per coat

Tools and spillage may be cleaned using white spirit or paraffin

Storage

FEB AQUASEAL BLACK BITUMEN PAINT contains a flammable solvent and all precautions against fire must be taken during both storage and use.

Store in cool conditions. Keep away from sources of ignition. **No Smoking.** Refer to Health and Safety data sheet.

Shelf Life

Minimum two years when stored in unopened containers according to the manufacturer's instructions.

Performance Data

Specific Gravity at 15°C	0.9
Viscosity	1500 CP
Recommended covering capacity (on steel)	10m ² /ltr
Approx. Solids content W/W	56% ± 1%
Drying time at 15°C	2 - 4 hours
Flash Point (able closed cup) minimum	40°C
Film thickness per coat applied at 11m ² /ltr	Wet 0.1mm / Dry 0.05mm

Black Bitumen Paint

Bitumen Roof Repair Mastic

Seals and Waterproofs Cracks, Joints and Holes

- Non-setting mastic filler
- Can be applied to damp surfaces
- Overcoat with Aquaseal roofing products
- Ideal for emergency plugging repairs
- Coverage, 0.7m² per litre, at 1.5mm thickness

Colour	Product Code	Pack Size	Box Qty
Black	FBAQBITROOF1	1LTR	12
	FBAQBITROOF2	2.5LTR	6
	FBAQBITROOF5	5LTR	4
	FBAQBITROOF25	25LTR	1



Aquaseal Waterproofing Products

Bitumen Roof Repair Mastic

Product Description

FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC is a trowel applied, black bitumen mastic, designed to retain its plasticity, and is suitable for overcoating with other Feb Aquaseal Roofing products.

Typical Uses

FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC is used to repair cracks and joints in roofs prior to application of the final waterproof coating, and for jointing metal gutters.

Features & Benefits

- Excellent adhesion to all roofing surfaces.
- Easy to use direct from the can.
- Remains plastic to accommodate moderate building movement.

Instructions for Use

Preparation of Substrate

All surfaces should be thoroughly cleaned to remove dust, dirt and other foreign matter which may affect adhesion.

Wet surfaces should be brushed free from water and wiped with a dry cloth to remove any excess moisture which remains.

Concrete, asbestos cement and other porous surfaces should be primed using FEB AQUASEAL FLASHING & ROOF PRIMER and allowed to dry.

Application

Apply FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC by trowel so that it fills the imperfection and overlaps adjoining surfaces by 50mm (2") to a thickness of 1.5mm (1/16").

For cracks exceeding 3mm (1/8") in width lay a reinforcing strip of metal foil, canvas or thin roofing felt to cover the imperfection allowing a 400mm (1 1/2") overlap, bed well in and cover the reinforcing strip with a further 1.5mm (1/16") thick coat of FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC.

FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC may be overcoated with other FEB AQUASEAL

roofing products. Oil based paint should not be applied over FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC as discolouration will result.

Coverage

(For Guidance Only) 0.7m² per litre at 1.5mm thickness approx. depending on substrate.

Tools should be cleaned with white spirit after use.

Storage

Store in original containers in cool, dry conditions.

Shelf Life

Up to two years if stored as recommended in manufacturer's sealed containers.

Performance Data

Test Method BS3712 pt 1 Penetration (mm)	20.0 mm
Solids content	86% ± 2%
Specific Gravity @ 20°C	1.45

Hyprufe D.P.M

Damp Proof Liquid Membrane

- For damp proofing floors and walls
- Suitable for external application below ground level
- Seamless damp proof coating
- Durable, long lasting
- Solvent free
- Coverage, approximately 1.0-2.25m² per litre

Colour	Product Code	Pack Size	Box Qty
Black	FBAQDPM5	5LTR	4
	FBAQDPM25	25LTR	1
	FBAQDPM200	200LTR	1



Aquaseal Waterproofing Products

Product Description

FEB AQUASEAL HYPRUFE D.P.M is a rubber/bitumen liquid emulsion with excellent adhesion which dries to a tough black seamless, flexible waterproof and vapour proof membrane.

Typical Uses

- Tanking and Waterproofing structures: to provide an impervious waterproof membrane on concrete and brick.
- Floors: to provide a liquid applied damp-proof sandwich membrane in new construction.
- Walls: for interior and exterior walls.
- As an adhesive: for bonding wood blocks and insulation board, expanded polystyrene and to provide a key for plastering.

Features & Benefits

- Jointless - FEB AQUASEAL HYPRUFE D.P.M forms a continuous, durable damp proof coating.
- Brush application - FEB AQUASEAL HYPRUFE D.P.M is quick and easy to apply by brush direct from the can.
- Solvent Free.

Instructions for Use

Priming: All surfaces to which FEB AQUASEAL HYPRUFE D.P.M is applied must be sound, stable, with an even finish and free from dirt, dust, loose debris, grease, etc. It may be applied to damp but not waterlogged surfaces. Hot, very dry or porous surfaces should be dampened with water before FEB AQUASEAL HYPRUFE D.P.M is applied.

Application: Stir well before use. FEB AQUASEAL HYPRUFE D.P.M may be applied by brush or squeegee. FEB AQUASEAL HYPRUFE D.P.M is not resistant to rain until it has fully dried.

WATERPROOFING & PROTECTIVE COATING OF STRUCTURES

Foundations, Retaining Walls and Bridge

Abutments: FEB AQUASEAL HYPRUFE D.P.M may be applied to green concrete immediately after shuttering has been removed. The FEB AQUASEAL

HYPRUFE D.P.M treatment should meet the damp-proof course provided in the base or wall. Two coats should be applied, the first at 2m²/litre, the second at 2.25m²/litre. The first coat should dry before applying the second. Before back filling, while the final coating is still tacky, a layer of building paper should be applied in order to protect it from damage. Then allow two days to elapse before back filling.

Concrete Beams and Columns: FEB AQUASEAL HYPRUFE D.P.M may be used to provide a vertical or horizontal damp-proof membrane on concrete beams and columns before they are clad with masonry or brickwork. Two coats of FEB AQUASEAL HYPRUFE D.P.M should be applied, the first at 2m²/litre, the second at 2.25m²/litre.

Tanking and Damp proofing Structures below Ground Level: Internal treatment with FEB AQUASEAL HYPRUFE D.P.M can be an effective means of preventing the ingress of dampness but it is unlikely to resist exposure to free water or water pressure.

FLOORS: As a Sandwich Membrane in New Construction: Two coats at the specified rates can give a dried film thickness of at least 0.6mm to comply with BS Code of Practice 102. Brush the first coat of FEB AQUASEAL HYPRUFE D.P.M onto the smooth and clean concrete sub-floor at the rate of 1m²/litre and allow to dry thoroughly. The second coat is then applied at 1m²/litre.

Blind with clean sand while tacky as a protection against foot traffic and to provide a good key for the top screed. Allow to dry thoroughly. The top finishing screed should be at least 50mm thick.

WALLS: FEB AQUASEAL HYPRUFE D.P.M may be used very effectively to treat walls where damp is penetrating. However, if rising dampness is suspected, the best method of prevention will be repair of the DPC or insertion of a new DPC.

Interior Walls with Extreme Dampness:

The plaster should be hacked back to expose the brickwork over the whole area. Any damage to the brickwork and mortar joints should be made good with cement mortar. Three coats of FEB AQUASEAL HYPRUFE D.P.M at 2.25m²/litre approximately should be applied, allowing each one to dry completely before the next is applied. The final coat should be blinded with clean sharp sand while still "tacky" and allowed to dry.

Coverage

(For Guidance Only) 1.0 – 2.25m² per litre approx. depending on application and substrate.

Storage

FEB AQUASEAL HYPRUFE D.P.M may be permanently damaged by frost. Store at temperatures in excess of 5°C.

Shelf Life

Minimum 12 months if stored in accordance to manufacturer's instructions.

Performance Data

Specific Gravity @ 20°C	Approx 1.01
Composition	Thixotropic cold applied bitumen emulsion with added rubber latex
Surface Temperature Limits	Between -4°C and 40°C
Solids Content	60% ± 1%
Viscosity	1200 CPs
Tack Free	1 - 2 hours dependent on ambient temp + humidity

Hyprufe D.P.M

Fast Drying Roof Waterproofer

Fibre Reinforced Waterproof Coating

- Brush applied
- For bituminous felt, asphalt, concrete & corrugated sheet roofs
- All weather application
- Rapid rain resistance, tack free in less than 3 hours
- Coverage, 1-1.5m² per litre, per coat

Colour	Product Code	Pack Size	Box Qty
Black	FBAQFASTDRY5	5LTR	4
	FBAQFASTDRY25	25LTR	1



Fast Drying Waterproofer

Product Description

FEB AQUASEAL FAST DRYING ROOF WATERPROOFER is a solvent based fibre reinforced black bitumen solution, which resists rain "wash off" almost immediately after application. FEB AQUASEAL FAST DRYING ROOF WATERPROOFER, may be applied to damp (not wet) or dry surfaces.

Typical Uses

For use as a roof waterproofer when inclement weather is expected, FEB AQUASEAL FAST DRYING ROOF WATERPROOFER is brush applied to damp or dry surfaces for the treatment of asphalt, concrete, fibre reinforced cement, metal, roofing felt or similar roofing materials whether flat or sloping. For slate roofs or where better or longer lasting protection is required, the Aquaseal Reinforced Membrane System should be used (as detailed later).

Features & Benefits

- Jointless - FEB AQUASEAL FAST DRYING ROOF WATERPROOFER forms a continuous, durable waterproof coating.
- All weather application - Solvent based, resists rain "wash off" almost immediately after application. May be applied to damp or dry surface.
- Brush application - FEB AQUASEAL FAST DRYING ROOF WATERPROOFER is quick and easy to apply by brush direct from the can.

Instructions for Use

Preparation of Substance

Surfaces on to which FEB AQUASEAL FAST DRYING ROOF WATERPROOFER is to be applied must be clean and free from any dirt, dust or any other material which may effect adhesion. Should moss or lichen be present this must be removed and the surface treated with EVERBUILD MOSS-AWAY in accordance with its application instructions. Make any structural repairs necessary; re-fix loose sheets replacing any that are badly damaged. Blisters in asphalt or roofing felt should be cut, and

re-sealed. Chippings other than those which form the surface of mineralised felt should be removed. Porous surfaces such as concrete or fibre reinforced cement should be primed using FEB AQUASEAL FLASHING & ROOF PRIMER which should be allowed to dry before proceeding. Splits or cracks in the roof surface should be repaired using FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC or FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE as appropriate, particular attention being paid to bolt holes in roof sheets. Triangular fillets should be employed at all internal angles and the Aquaseal treatment carried up adjoining vertical surfaces by a minimum of 150 mm or beneath existing flashing which should be removed or bent upwards prior to application and replaced once the coating has dried.

Application

Stir well before use. FEB AQUASEAL FAST DRYING ROOF WATERPROOFER should be applied by brush or broom, two or more coats should be used to provide a durable finish, second and subsequent coats being applied once previous coats have fully dried. For slate roofs or where the roof is in poor condition or where longer lasting protection is required the Aquaseal Reinforced Membrane System should be employed.

Aquaseal Reinforced Membrane System

Surface preparations should be carried out as above and the first coat of FEB AQUASEAL FAST DRYING ROOF WATERPROOFER applied, whilst the FEB AQUASEAL FAST DRYING ROOF WATERPROOFER is still wet bed in reinforcing fabric/hessian mesh brushing in well to ensure good adhesion, NOTE adjacent areas of membrane should overlap by

75 mm. After the membrane has been bedded a further coat of FEB AQUASEAL FAST DRYING ROOF WATERPROOFER should be immediately applied and allowed to dry.

When previous coats have dried, a final application of FEB AQUASEAL FAST DRYING ROOF WATERPROOFER should be applied.

Note: FEB AQUASEAL FAST DRYING ROOF WATERPROOFER dries to a black finish and is compatible with a wide range of solar reflective finishes. Once dry FEB AQUASEAL FAST DRYING ROOF WATERPROOFER can be overcoated with the FEB AQUASEAL SOLAR REFLECTIVE ROOF COAT in accordance with the relevant application instructions. Never coat roof lights, windows or translucent sheets these may constitute a hidden hazard if disguised.

Coverage

FEB AQUASEAL FAST DRYING ROOF WATERPROOFER should be applied at 1-1.5m²/ltr per coat.

Tools should be cleaned with white spirit or paraffin.

Storage

FEB AQUASEAL FAST DRYING ROOF WATERPROOFER contains a flammable solvent; all normal precautions against fire must be taken in both storage and use. Store in cool, dry conditions. Keep away from sources of ignition.

Shelf Life

Up to 2 years if stored in accordance to manufacturer's instructions in unopened containers.

Performance Data

Flash Point (able Closed Cup) (°C)	minimum 32°C
Specific Gravity @ 20°C	0.97
Solids Content	55% ± 1%
Tack Free Time	2 - 2 ½ hours

Firmafix

Cold Applied Roof Felt Adhesive

- Lap cement & bedding compound suitable for use with all types of roofing felts
- High bond strength
- 3 in 1 multi-purpose product
- Coverage, up to 2m² per litre

Colour	Product Code	Pack Size	Box Qty
Black	FBAQFELT1	1LTR	12
	FBAQFELT2	2.5LTR	6
	FBAQFELT5	5LTR	4
	FBAQFELT25	25LTR	1



Aquaseal Waterproofing Products

Product Description

FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE is a cold applied black bitumen based roof felt and lap adhesive of brushable consistency. Also suitable for use as a gritting adhesive.

Typical Uses

FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE is used to bond roofing felt to roofing felt, concrete, asphalt, metal and similar surfaces. Note: It is not normal practice to stick felt to wood, it should be nailed. FEB AQUASEAL ROOF FELT ADHESIVE is used for sealing laps on felt. As a gritting adhesive, FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE bonds roof chippings to roofing felt and mastic asphalt.

Features & Benefits

- The bitumen base is the same as is used in roofing felt manufacture, ensuring a natural and tenacious bond.
- Cold applied, no heating required.
- Resists rain wash-off almost immediately after application.
- Excellent adhesion to most roofing surfaces.

Instructions for Use

Preparation of Substrate

The surface to which felt is to be fixed must have any moss and lichen removed, and the surface treated with a EVERBUILD MOSS-AWAY. All dust, dirt, grease and other material which may impair adhesion must be removed. Absorbent or dusty surfaces must be treated with a coat of FEB AQUASEAL FLASHING AND ROOF PRIMER at an approximate rate of 5.5m²/ltr. The general techniques of felt laying should be in accordance with BS Code of Practice 144 - Part 3, 1970.

Application

AS FELT ADHESIVE: Apply FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE by brush or broom and when tacky (after approx. 15 minutes), roll roofing felt into position and press down firmly. When the adhesive is nearly dry (after approx. 6 hours) inspect the felt, any areas not adhering should be firmly pressed or rolled down. (Note: It is not advisable to stick rolling felt directly to timber. When fixing felt to boarded roofs, the first layer of felt should be nailed).

AS LAP CEMENT: When nailing felt to wooden pitched roofs, it is essential to seal laps to ensure they are watertight. Working up the roof, position first sheet allowing a 40mm (1½") overlap to eaves and gables. Fix by nailing a 600mm (2ft) centres, 20mm (¾") in from top edge. Carefully bend felt over gables and eaves and fix by nailing at 50mm (2") centres.

Position second and successive sheets allowing a minimum 75mm (3") overlap on lower sheets and fix in a similar way. Hold back lower edge, apply FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE to lap and press back into position and nail at 50mm (2") centres along the lap.

AS GRITTING ADHESIVE: FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE can be used for fixing grit or chippings over asphalt or roofing felt to provide a solar reflective coating. Surfaces must be sound and clean and the chippings dust free. Apply chippings within 30 minutes of applying this product.

FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE contains a solvent which can attack certain insulants. If its use is considered with materials other than roofing felts, or normal roofing products, please contact Technical Services.

Coverage

As a roofing felt adhesive/lap cement 1.5- 2.0m²/ltr. As a gritting adhesive 1m²/ltr for 3mm grit down to 0.75m²/ltr for 2mm grit. (0.7m²/ltr for 12mm chippings).

Tools and equipment can be cleaned with white spirit or paraffin.

Storage

FEB AQUASEAL FIRMAFIX ROOF FELT ADHESIVE contains a flammable solvent; all normal precautions against fire should be taken during storage and use. Store in cool, dry conditions. Keep away from sources of ignition.

Shelf Life

Minimum two years when stored in unopened containers according to the manufacturer's instructions.

Firmafix

Performance Data

Relative Density @ 20°C	0.95 ± 0.04
Flash Point (able closed cup)	45°C
Solids Content	60% ± 1%
Tack Free Time	3 - 4 hours

Hyband

Self Adhesive Flashing Tape

- Superior adhesion
- Easily cut and profiled
- Flexible

Colour	Product Code	Pack Size	Box Qty
Lead Look	FBAQFLAS75	75MM	8
	FBAQFLAS100	100MM	6
	FBAQFLAS150	150MM	4
	FBAQFLAS225	225MM	2
	FBAQFLAS300	300MM	2
	FBAQFLAS450	450MM	1



Aquaseal Waterproofing Products

Hyband

Product Description

FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE is a heavy duty metal foil coated with a layer of bitumen based, pressure-sensitive adhesive protected by a quick release backing. FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE is readily applied by hand pressure and its watertight grip grows stronger with time to ensure lasting adhesion. FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE is flexible enough to mould to background contours, upstands and angles.

Typical Uses

Roofs - Construction and Repair

- Sealing roof skirtings (upstands) and eave pieces/edge flashing to felt.
- Sealing around RSJ's, extraction vents and concrete columns and capping corrugated roof apex prior to fixing crest.
- Roof cappings/repairs to damaged slates and tiles/replacing stolen lead and damaged lead flashings.

Drainage System- Repairs and protection of pipework

- Gutter and valley linings and patch repairs.
- Gutter joint repairs.
- Down pipes and joint repairs/drip trays into gutters.

Glazing Repairs

- Emergency repairs to glass/glazing bars/roof lights/vehicle maintenance.
- Sealing leaks in vans, trucks, and caravans.

Features & Benefits

- Instant seal/weatherproof.
- Strong adhesion/multi-use.
- Easy to apply.
- Moulds around contours.

Instructions for Use

Preparation of Substrate

Before using in low temperature conditions (i.e. below 5°C) adhesion of FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE will be improved if previously stored for 48 hours or more at temperatures above 10°C. All surfaces should be sound, stable, clean and dry and any dirt, dust, old flaky paint or mastic should be removed thoroughly with a wire bristled brush. Deep cracks, fissures and very rough surfaces should be filled with FEB AQUASEAL BITUMEN ROOF MASTIC.

Priming

In cold weather the use of FEB AQUASEAL FLASHING AND ROOF PRIMER is recommended to ensure full, permanent adhesion onto rough, uneven surfaces or porous surfaces. Smooth non-porous surfaces do not require priming. The primer takes 15 to 20 minutes to dry, depending upon weather conditions. Do not apply the FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE until the primer has become full, set and solvent-free.

Application

Cut off the required length of FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE allowing at least 50mm either side of the joint area. For

short lengths, remove backing and press firmly into place onto the prepared surface. Use hand pressure followed by roller or shaped wood to ensure full, firm contact. On longer lengths, cut to length and peel backing from one end, press well into place and continue removing backing and placing as you move along the treated area. When placing FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE always work from the centre of the strip to the edge to ensure that all air bubbles are expelled thus providing intimate contact between strip and substrate. To lap FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE, simply allow at least 25mm overlap. Make sure that the two surfaces are firmly pressed together and smooth down with a roller or shaped wood to ensure full contact. In very cold conditions, adhesion may be further enhanced by warming the FEB AQUASEAL HYBAND SELF ADHESIVE FLASHING TAPE surface gently with a warm air blower, then pressing the strip firmly into position as above.

Storage

Store in cool, dry conditions.

Shelf Life

Minimum two years when stored in unopened containers, according to the manufacturer's instructions.

Performance Data

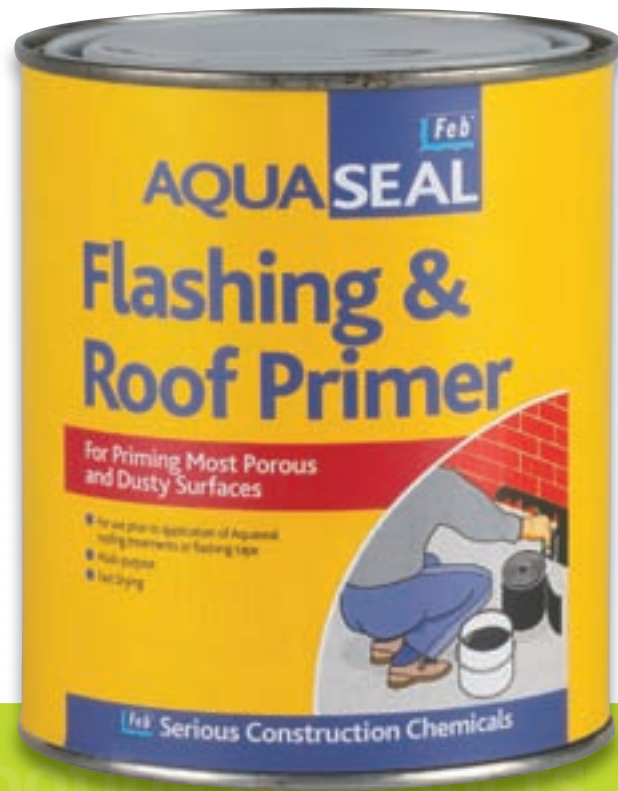
Service temperature limits	-10°C to 80°C
Adhesive Thickness	1.3mm
Foil thickness	50 microns
Elongation	15%
Tape strength	3.5N/mm ²
Ultimate adhesion to concrete	3.5N/mm ²
Flexibility @ -15°C	No cracking
Application Temps	+5 to +40°C

Flashing & Roof Primer

For Priming Most Porous and Dusty Surfaces

- For use prior to application of Aquaseal roofing treatments or flashing tape
- Multi-purpose
- Fast drying

Colour	Product Code	Pack Size	Box Qty
Black	FBAQPRIME1	1LTR	12
	FBAQPRIMES	5LTR	4



Aquaseal Waterproofing

Product Description

FEB AQUASEAL FLASHING AND ROOF PRIMER is a priming solution designed to deeply penetrate and seal porous surfaces to provide a base for bituminous water proofing and flashing systems. FEB AQUASEAL FLASHING AND ROOF PRIMER is a blend of high quality bitumen's and hydrocarbon solvents. It contains a wetting agent to enable it to be applied to 'damp' as well as dry surfaces.

Typical Uses

FEB AQUASEAL FLASHING AND ROOF PRIMER is used prior to the application of a wide range of other Aquaseal products. Applied to porous substrates, it seals and improves the adhesion of Aquaseal waterproofing and flashing systems which include:

- FEB AQUASEAL liquid roof waterproofing systems.
- FEB AQUASEAL HYBAND SELF-ADHESIVE FLASHING TAPE.
- Self-adhesive sheet membranes.

FEB AQUASEAL FLASHING AND ROOF PRIMER may be applied to damp or dry surfaces and is suitable for application to a variety of surfaces. FEB AQUASEAL FLASHING AND ROOF PRIMER dries rapidly and may impart a degree of waterproofing until further work is carried out.

Features & Benefits

- Early resistance to rain.
- Multi-use product.
- Simple brush application.

Instructions for Use

Preparation of Substrate

Surfaces on to which FEB AQUASEAL FLASHING AND ROOF PRIMER is applied must be clean, and free from dirt, grease or other material, which may impair adhesion. Where there is moss or lichen present, clean surfaces with EVERBUILD MOSS-AWAY as directed, before proceeding.

Application

FEB AQUASEAL FLASHING AND ROOF PRIMER can be applied by brush to damp (not wet) or dry surfaces. FEB AQUASEAL FLASHING AND ROOF PRIMER dries quickly and is resistant to rainfall 20 - 30 minutes after application.

Coverage

The generally recommended coverage rate for FEB AQUASEAL FLASHING AND ROOF PRIMER is:

Metal Surfaces 12 - 16m²/ltr

Porous Surfaces 6 - 8m²/ltr

Tools and equipment may be cleaned using white spirit or paraffin.

Storage

FEB AQUASEAL FLASHING AND ROOF PRIMER contains a flammable solvent and all precautions against fire must be taken during both storage and use. Store in cool conditions. Keep away from sources of ignition. No Smoking. Refer to Health and Safety data sheet.

Shelf Life

Minimum two years when stored in unopened containers according to the manufacturer's instructions.

Performance Data

Specific Gravity at 15°C	0.9
Flash Point (able closed cup) minimum	40°C
Drying Time (approximately) at 15°C	3 - 6 hours
Solids Content	44%
Viscosity	80 CP

Flashing & Roof Primer

Solvent Free Roof Waterproofer

For Waterproofing of Flat Roofs, including Felt, Asphalt & Corrugated Sheets

- Water based formulation
- Vapour permeable, prevent strapped moisture damaging the substrate
- Firm, flexible & seamless waterproof membrane
- Coverage, approximately 1.6m² per litre, per coat

Colour	Product Code	Pack Size	Box Qty
Black	FBAQSFREE5	5LTR	4
	FBAQSFREE25	25LTR	1



Aquaseal Waterproofing Products

Solvent Free Roof Waterproofer

Product Description

FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER is a high quality versatile bitumen emulsion of brushing consistency which dries to give a firm, flexible, jointless waterproof membrane.

Typical Uses

As a roof waterproofer for the treatment of asphalt, concrete, fibre reinforced cement, metal, roofing felt and similar roof surfaces whether flat, sloping or vertical. For pitched slate roofs or where better and long lasting protection is required, FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER should be used in conjunction with Reinforcing Fabric.

Features & Benefits

- Jointless - FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER forms a continuous durable waterproofing coating.
- Vapour Permeable - Once dry FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER allows substrates to breathe.
- Solvent Free - FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER is non flammable. Being water based it is less harmful to the environment and tools may be cleaned with water whilst wet.
- Brush Application - FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER is quick and easily applied by brush.

Instructions for Use

Preparation of Substrate

Surfaces must be clean and free from any dirt, dust, rust or any material which may affect adhesion. Should moss or lichen be present this must be removed and the surface treated with EVERBUILD MOSS-AWAY in accordance with its application instructions. Re-fix loose sheets replacing any that are badly damaged. Blisters in asphalt or roofing should be cut, and re-sealed. Chippings other than those which form the surface of mineralised

felt should be removed. Porous surfaces such as concrete or fibre reinforced cement sheeting should be primed using FEB AQUASEAL FLASHING AND ROOF PRIMER. Splits or cracks in the roof surface should be repaired using FEB AQUASEAL BITUMEN ROOF REPAIR MASTIC or FEB AQUASEAL HYBAND SELF-ADHESIVE FLASHING TAPE. Triangular fillets should be employed at all internal angles and the Aquaseal treatment carried up adjoining vertical surfaces by a minimum of 150mm or beneath existing flashing which should be removed or bent upwards prior to application and replaced once the coating has dried.

Application

Apply by brush. Two or more coats should be used to provide a durable finish. Second and subsequent coats being applied once previous coats have fully dried. Surfaces may be damp (not wet) or dry and brushes may be dampened before and occasionally during use to avoid clogging and ease application. For slate roofs, or where the roof is in poor condition, or where better or longer lasting protection is required the Aquaseal Reinforced Membrane System should be employed.

This product is not resistant to rain or frost until it has fully dried. Protect from frost in both storage and use. Do not apply if temperature is below 5°C or if rain is expected within the next few hours. Never coat roof lights, windows or transparent sheets as these may constitute a hidden hazard if disguised.

Notes: Once dry product can be overcoated with FEB AQUASEAL SOLAR REFLECTIVE ROOF COAT if required.

Aquaseal Reinforced Membrane System

Prepare surface as above and the first coat of FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER applied. Whilst the product is still wet, bed in the Reinforcing Fabric brushing in well to ensure good adhesion. Adjacent areas of membrane should overlap by 75mm. After the membrane has been bedded a further coat of FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER should then be immediately applied. Two further coats of FEB AQUASEAL SOLVENT FREE ROOF WATERPROOFER should then be applied allowing previous coats to fully dry prior to application.

Coverage

Apply at 1.6m²/litre per coat. Tools can be cleaned with cold water whilst wet, if dried, white spirit or paraffin should be used.

Storage

Store sealed in original containers in a cool dry place away from direct sunlight and protected from frost.

Shelf Life

One year when stored in unopened containers.

Performance Data

Specific Gravity @ 20°C	1.00
Application Temperature Limit	+5°C to + 50°C
Flashpoint	Non flammable
Tack Free Time	60 - 120 minutes depending on conditions
Solids Content	55% ± 1%

Solar Reflective Roof Coat

Aluminium Roof Paint

- Brush applied solar reflective top coat for bituminous felt, asphalt, concrete & corrugated sheet roofs
- Heat & light reflective
- Aluminium finish
- Protects roof from harmful UV radiation, reduces heat up & thermal expansion
- Coverage, up to 8m² per litre

Colour	Product Code	Pack Size	Box Qty
Aluminium	FBAQSOLAR5	5LTR	4
	FBAQSOLAR25	25LTR	1



Aquaseal Waterproofing Products

Product Description

FEB AQUASEAL SOLAR REFLECTIVE ROOF COATING is a high quality decorative and weatherproof, bitumen based paint which dries to an aluminium finish.

Typical Uses

FEB AQUASEAL SOLAR REFLECTIVE ROOF COATING may be applied to a wide range of substrates including metal and bitumen coatings together with roofing felt. Its bright aluminium colour gives good heat and light reflective properties, ideal for reducing solar heat pick-up on dark roofs, tanks and similar surfaces.

Features & Benefits

- Reduces heat build-up on flat and sloping roofs, limiting thermal movement.
- Protects roofing from the harmful effects of UV radiation.
- Contains a 'leafing' aluminium pigment to provide a bright reflective finish.

Instructions for Use

Preparation of Substrate

FEB AQUASEAL SOLAR REFLECTIVE ROOF COATING should be stirred thoroughly before and during use to ensure even distribution of the aluminium pigment. Ensure surfaces are clean, dry and free from loose sand or any other contaminant which may impair adhesion.

Where there is moss or lichen present, clean surfaces with EVERBUILD MOSS-AWAY as directed, before proceeding.

Application

FEB AQUASEAL SOLAR REFLECTIVE ROOF COATING can be applied by brush or roller.

If the finishing paint is to be applied over existing bitumen coatings, it is important that such treatments are thoroughly dry (i.e. applied after at least 14 days) and that care is taken to see that brushing is kept to a minimum to prevent softening of the substrate. Two coats are recommended, the first coat must be allowed to dry thoroughly before the second coat is applied.

Coverage

FEB AQUASEAL SOLAR REFLECTIVE ROOF COATING should be applied at 6-8m²/litre per coat.

Tools and equipment can be cleaned with white spirit.

Storage

FEB AQUASEAL SOLAR REFLECTIVE ROOF COATING contains a flammable solvent; all normal precautions against fire should be taken during storage and use. Store in cool, dry conditions. Keep away from sources of ignition.

Shelf Life

Minimum two years when stored in unopened containers, according to the manufacturer's instructions.

Performance Data

Specific Gravity @ 20°C	1.00
Flash Point (able closed cup)	minimum 40°C
Drying Time	Approx 3 – 4 hours
Viscosity	300 CP
Solids Content	60% ± 1%

Solar Reflective Roof Coat



Page No.	Product Description	Pack Size	Product Code	Box Qty	Boxes/ Pallet	Pack Barcode
3	FEB ADMIXTURES AND BUILDING CHEMICALS					
4	FEBMIX ADMIX "ORIGINAL" 118532	5LTR	FBMIX5	4	30	5029347607203
4	FEBMIX ADMIX "ORIGINAL" 118534	25LTR	FBMIX25	1	32	5029347607210
4	FEBMIX ADMIX "ORIGINAL" 118536	205LTR	FBMIX205	1	4	NO BARCODE
5	FEBMIX PLUS 118596	5LTR	FBMIXPLUS5	4	30	5029347607180
5	FEBMIX PLUS 118598	25LTR	FBMIXPLUS25	1	32	5029347607197
5	FEBMIX PLUS 118600	205LTR	FBMIXPLUS205	1	4	NO BARCODE
6	FEBMIX DH MORTAR PLASTICISER 191155	250	FBMIXDH	1	48	5029347607227
7	FEBPROOF PLUS 144711	5LTR	FBPROOFPS5	4	30	5029347607319
7	FEBPROOF PLUS 144709	25LTR	FBPROOFPS25	1	32	5029347607326
8	FEB RENDAMIX 119555	5LTR	FBRENDA5	4	30	5029347607234
8	FEB RENDAMIX 119556	25LTR	FBRENDA25	1	32	5029347607241
9	FEBSPPEED 119589	5LTR	FBSPEED5	4	30	5029347607333
9	FEBSPPEED 119590	25LTR	FBSPEED25	1	32	5029347607340
10	FEB WINTAMIX FROSTPROOFER 119812	5LTR	FBWINTA5	4	30	5029347607258
10	FEB WINTAMIX FROSTPROOFER 119813	25LTR	FBWINTA25	1	32	5029347607265
11	FEBTONE POWDER MORTAR TONE BLACK 202326	1KG	FBTONEBK1	6	60	5029347607371
11	FEBTONE POWDER MORTAR TONE BROWN 202988	1KG	FBTONEBN1	6	60	5029347607388
11	FEBTONE POWDER MORTAR TONE RED 202959	1KG	FBTONERD1	6	60	5029347607395
11	FEBTONE POWDER MORTAR TONE YELLOW 202914	1KG	FBTONEYW1	6	60	5029347607401
12	FEBTONE LIQUID MORTAR TONE BLACK 197620	2.5LTR	FBTONEBKQ2	6	40	5029347607425
12	FEBTONE LIQUID MORTAR TONE BROWN 197619	2.5LTR	FBTONEBNQ2	6	40	5029347607432
12	FEBTONE LIQUID MORTAR TONE RED 197621	2.5LTR	FBTONERDQ2	6	40	5029347607418
13	FEB BRICKCLEAN 117937	2.5LTR	FBBRICKCL2	6	40	5029347607845
13	FEB BRICKCLEAN 117936	5LTR	FBBRICKCL5	4	30	5029347607852
13	FEB BRICKCLEAN 117934	25LTR	FBBRICKCL25	1	32	5029347607869
14	FEBSTRIKE 119661	5LTR	FBSTRIKE5	4	30	5029347607647
14	FEBSTRIKE 119663	25LTR	FBSTRIKE25	1	32	5029347607654
15	FEB BONDING AGENTS					
16	FEBOND PVA "ORIGINAL" 118972	1LTR	FBOND PVA1	12	40	5029347607449
16	FEBOND PVA "ORIGINAL" 118975	2.5LTR	FBOND PVA2	6	40	5029347607456
16	FEBOND PVA "ORIGINAL" 118973	5LTR	FBOND PVA5	4	30	5029347607463
16	FEBOND PVA "ORIGINAL" 118974	25LTR	FBOND PVA25	1	32	5029347607470
17	FEB GENERAL PURPOSE PVA 118981	5KG	FBGPPVA5	4	30	5029347607487
17	FEB GENERAL PURPOSE PVA 153100	25KG	FBGPPVA25	1	32	5029347607494
18	FEBOND SBR 118990	5LTR	FBOND SBR5	4	30	5029347607357
18	FEBOND SBR 118991	25LTR	FBOND SBR25	1	32	5029347607364
18	FEBOND SBR 118993	205LTR	FBOND SBR205	1	4	NO BARCODE
19	FEB CONCRETE REPAIR & SPECIALITY MORTARS					
20	FEBPATCH 45 119572	25KG	FBPATCH45	1	50	5029347607630
21	FEBPATCH 90 118264	25KG	FBPATCH90	1	40	5029347607524
22	FEB ROOFING MORTAR 192813	20KG	FBROOFMOR	1	50	5029347607821
23	FEBGROUT UNIVERSAL 202991	25KG	FBGROUT25	1	40	5029347607579
24	FEBBOX NF 119574	3KG	FBBOXNF3	1	100	5029347607609
24	FEBBOX NF	10KG	FBBOXNF10	1	100	5029347607616
25	FEBBOX MP 168425	2KG	FBBOXMP2	1	100	5029347607586
25	FEBBOX MP 168426	5KG	FBBOXMP5	1	100	5029347607593
26	FEBBOX FC	5KG	FBBOXFC5	1	100	5029347608361
27	FEBBOX LW 118312	2.5KG	FBBOXLW	1	100	5029347607562
28	FEB SUPERCRETE 118278	3KG	FBSUPER3	1	100	5029347607531
29	FEB FLOORING SCREEDS & SEALERS					
30	FEB CURE SUPERCLEAR 181 117931	5LTR	FB CLEAR5	4	30	5029347607760
30	FEB CURE SUPERCLEAR 181 117932	25LTR	FB CLEAR25	1	24	5029347607777
30	FEB CURE SUPERCLEAR 181 117933	205LTR	FB CLEAR205	1	4	NO BARCODE
31	FEB CO CONCRETE DUSTPROOFER 117939	5LTR	FB CO5	4	30	5029347607746
31	FEB CO CONCRETE DUSTPROOFER 117440	25LTR	FB CO25	1	32	5029347607753
31	FEB CO CONCRETE DUSTPROOFER	200LTR	FB CO200	1	4	NO BARCODE
32	FEB FLOR SELF LEVEL 167434	20KG	FB FLOR20	1	4	NO BARCODE
33	FEB FLOR PLUS SELF LEVEL 147793	20KG	FB FLORPLUS	1	50	5029347607708
34	FEB FLOR LATEX POWDER 167650	20KG	FB FLORLTPW	1	50	5029347607692
35	FEB FLOR LATEX LIQUID 118165	5LTR	FB FLORLTLQ	4	30	5029347607685
36	FEB FLOR ULTRALAY	20KG	FB FLORULTRA	1	50	5029347607739



Page No.	Product Description	Pack Size	Product Code	Box Qty	Boxes/ Pallet	Pack Barcode
37	FEB STRUCTURAL WATERPROOFING					
38	FEBTANK SUPER GREY	25KG	FBTANKSGY	1	40	5029347607807
38	FEBTANK SUPER WHITE	25KG	FBTANKSWE	1	40	5029347608125
40	FEB WATERPLUG 203168	5KG	FBWATPLUG5	1	100	5029347607814
41	FEB TILE ADHESIVES & GROUTS					
42	FEB PERMASET TILE ADH GREY 119783	20KG	FBPERMGY20	1	50	5029347607999
43	FEB FASTSET TILE ADH 119748	10KG	FBFASTSET10	1	100	5029347608019
43	FEB FASTSET TILE ADH 119749	20KG	FBFASTSET20	1	50	5029347608026
44	FEB FASTSET PLUS TILE ADH	20KG	FBFASTPLUS20	1	50	5029347608118
45	FEB GAPPIL WALL&FLOOR GROUT 191656	5KG	FBGAPPIL5	1	100	5029347608088
45	FEB GAPPIL WALL&FLOOR GROUT 119787	10KG	FBGAPPIL10	1	100	5029347608095
45	FEB GAPPIL WALL&FLOOR GROUT 119788	20KG	FBGAPPIL20	1	50	5029347608101
46	FEB UNIFIL INT&EXT GROUT 119741	1.5KG	FBUNI1	4	66	5029347608064
46	FEB UNIFIL INT&EXT GROUT 119739	3KG	FBUNI3	4	66	5029347608071
47	FEB CERAMIX NON SLIP TILE ADH 119773	3.5KG	FBCERA3	4	36	5029347607937
47	FEB CERAMIX NON SLIP TILE ADH 119771	7.5KG	FBCERA7	1	100	5029347607944
47	FEB CERAMIX NON SLIP TILE ADH 119772	15KG	FBCERA15	1	56	5029347607951
48	FEB WETMIX WATERPROOF TILE ADH	3.5KG	FBWETMIX3	4	36	5029347608354
48	FEB WETMIX WATERPROOF TILE ADH 119767	7.5KG	FBWETMIX7	1	100	5029347607968
48	FEB WETMIX WATERPROOF TILE ADH 119768	15KG	FBWETMIX15	1	56	5029347607975
49	FEB SURFACE PROTECTORS					
50	FEB BLOCK & PAVING SEAL 118488	5LTR	FBBLOCK5	4	30	5029347607913
50	FEB BLOCK & PAVING SEAL 121363	25LTR	FBBLOCK25	1	24	5029347607920
51	FEB SILICON EXT WATERPROOFER 119585	5LTR	FBSIL5	4	30	5029347607784
51	FEB SILICON EXT WATERPROOFER 119583	25LTR	FBSIL25	1	24	5029347607791
52	GEO-FIX PAVING COMPOUND BUFF	10KG	GEOFIX10BF	1	64	5029347607128
52	GEO-FIX PAVING COMPOUND GREY	10KG	GEOFIX10GY	1	64	5029347607135
52	GEO-FIX PAVING COMPOUND BUFF	20KG	GEOFIX20BF	1	44	5029347607104
52	GEO-FIX PAVING COMPOUND GREY	20KG	GEOFIX20GY	1	44	5029347607111
53	AQUASEAL WATERPROOFING PRODUCTS					
54	AQUASEAL NO.1 ACRYLIC ROOF SEAL GY 144715	5KG	FBAQACRYL5	4	24	5029347608453
54	AQUASEAL NO.1 ACRYLIC ROOF SEAL GY	20KG	FBAQACRYL20	1	24	5029347608798
55	AQUASEAL BITUMEN PAINT BK 117517	1LTR	FBAQBTPNT1	12	25	5029347608460
55	AQUASEAL BITUMEN PAINT BK 117513	2.5LTR	FBAQBTPNT2	6	35	5029347608477
55	AQUASEAL BITUMEN PAINT BK 117510	5LTR	FBAQBTPNT5	4	36	5029347608491
55	AQUASEAL BITUMEN PAINT BK 117503	25LTR	FBAQBTPNT25	1	28	5029347608484
56	AQUASEAL BIT ROOF MASTIC 117530	1LTR	FBAQBTRTOOF1	12	25	5029347608507
56	AQUASEAL BIT ROOF MASTIC 117526	2.5LTR	FBAQBTRTOOF2	6	35	5029347608514
56	AQUASEAL BIT ROOF MASTIC 117523	5LTR	FBAQBTRTOOF5	4	36	5029347608538
56	AQUASEAL BIT ROOF MASTIC 117520	25LTR	FBAQBTRTOOF25	1	28	5029347608521
57	AQUASEAL HYPRUFE D.P.M 117548	5LTR	FBAQDPM5	4	36	5029347608576
57	AQUASEAL HYPRUFE D.P.M 117541	25LTR	FBAQDPM25	1	28	5029347608569
57	AQUASEAL HYPRUFE D.P.M 117544	200LTR	FBAQDPM200	1	4	NO BARCODE
58	AQUASEAL FAST DRY ROOF W/P 117534	5LTR	FBAQFASTDRY5	4	36	5029347608590
58	AQUASEAL FAST DRY ROOF W/P 120021	25LTR	FBAQFASTDRY25	1	28	5029347608583
59	AQUASEAL FIRMAFIX ROOF FELT ADH 117585	1LTR	FBAQFELT1	12	25	5029347608606
59	AQUASEAL FIRMAFIX ROOF FELT ADH 117581	2.5LTR	FBAQFELT2	6	35	5029347608613
59	AQUASEAL FIRMAFIX ROOF FELT ADH 117578	5LTR	FBAQFELT5	4	36	5029347608637
59	AQUASEAL FIRMAFIX ROOF FELT ADH 117575	25LTR	FBAQFELT25	1	28	5029347608620
60	AQUASEAL HYBAND FLASHING 10MTR 119961	75MM	FBAQFLAS75	8	72	5029347608699
60	AQUASEAL HYBAND FLASHING 10MTR 119962	100MM	FBAQFLAS100	6	72	5029347608644
60	AQUASEAL HYBAND FLASHING 10MTR 119963	150MM	FBAQFLAS150	4	72	5029347608651
60	AQUASEAL HYBAND FLASHING 10MTR 119964	225MM	FBAQFLAS225	2	98	5029347608668
60	AQUASEAL HYBAND FLASHING 10MTR 120031	300MM	FBAQFLAS300	2	72	5029347608675
60	AQUASEAL HYBAND FLASHING 10MTR 120032	450MM	FBAQFLAS450	1	98	5029347608682
61	AQUASEAL FLASH&ROOF PRIMER 117571	1LTR	FBAQPRIME1	12	25	5029347608712
61	AQUASEAL FLASH&ROOF PRIMER 117568	5LTR	FBAQPRIME5	4	36	5029347608729
62	AQUASEAL SOLV FREE ROOF W/P 117493	5LTR	FBAQSFR5	4	36	5029347608743
62	AQUASEAL SOLV FREE ROOF W/P 117486	25LTR	FBAQSFR25	1	28	5029347608736
63	AQUASEAL SOLAR REF COAT 117483	5LTR	FBAQSOLAR5	4	36	5029347608750
63	AQUASEAL SOLAR REF COAT 117478	25LTR	FBAQSOLAR25	1	28	5029347608811
2	FEB DISPLAY STAND*	EACH	DISPFEB	1	-	-

*Available subject to minimum purchase requirements



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