



AQUACHEM® FOR TANKING

SUMMARY OF FEATURES

- water based coating
- solvent free, safer to handle and apply
- can be applied to damp surfaces and green concrete
- a vapour barrier, prevents moisture movement under hydrostatic pressure
- trafficable, a floor finish in its own right
- resistant to chemical attack, can be applied immediately to new or repaired concrete surfaces



AQUACHEM is a trade mark of ROTAFIX

ROTAFIX AQUACHEM SURFACE MEMBRANE – FLOOR AND WALL COVERING

Description of Product, Ancillaries and General Instructions for use

ROTAFIX AQUACHEM SYSTEM

ROTAFIX AQUACHEM SURFACE MEMBRANE – GENERAL DESCRIPTION OF PRODUCT

THE SYSTEM COMPRISES:

Rotafix liquid epoxy membrane, **Aquachem**, consists of a series of primers and coloured coats including decorative flakes and skid resistant granules. It is a high quality, two part water-based epoxy emulsion, available in standard BS4800 and RAL shades and to special order.

The primer is used for regulating surface absorption on most substrates. It is used as a clear sealer over decorative flake finishes and as a clear sealer where the general profile of the substrate, such as barrel vaulted arch brick cellars, needs to be highlighted through the translucent appearance of a 2 or 3 coat **Aquachem** primer/sealer finish.

The **Aquachem** system is suitable for concrete and rendered fish tanks and pools, fish farms, concrete potable water tanks and the temporary protection of green structural concrete slabs. It is used as a swimming pool lining system.

Ancillary materials

Aquachem is used with a variety of sizes, types and shapes of aggregates as either incorporated within multi-coat applications of **Aquachem** or in order to conform to specifications for skid resistance for a variety of substrates such as timber decking, steel bridges, cycle paths and concrete walkways. Coloured PVA flakes are used to provide semi-decorative surfaces in industrial kitchens, laboratories and other interior applications. They are overcoated with **Aquachem** primer/sealer or **Chemflor Clear**.

For specific uses of **Aquachem** seek advice from **Rotafix** Technical Department and, if necessary, request a written specification for your job and anticipated conditions. Our Technical Department has information on spray equipment for both application of coloured flakes and the **Aquachem** coating system. Information on ancillary equipment such as wet film thickness gauges and elcometers is available on request together with a list of recommended contractors and applicators.

INSPECTION OF SUBSTRATES AND ASSESSMENT OF SUITABILITY

- In general, **Aquachem** systems are applied to clean, dry or damp cementitious screeds or concrete slabs and to various types of stone and sound renders on vertical and horizontal surfaces. Aged clean asphalt is suitable for **Aquachem** application. **Aquachem** is suitable for timber and steel substrates when used with appropriate primers. It is essential in all cases to have sound, clean, non-friable substrates.

Contact Rotafix Technical Department for advice on using **Aquachem** products on new asphalt, ceramic and quarry tiles, chemically-hardened concrete and terrazzo, as these require specialist knowledge, equipment and application techniques.

- Previous coatings should be removed by suitable preparation methods such as water-jetting, grit or sodium carbonate blasting, chemical etching and other mechanical means including Jason needle gun and Vonarx type scarifier. In the case of the latter two systems, a regulating screed may be required prior to the application of the **Aquachem** system. Consult our Technical Department for specific methods of cleaning hydraulic oil and other individual contaminants.
- **Aquachem** should not be laid over vinyl tiles or their underlying regulating screeds.
- New expansion joints are treated by applying the **Aquachem** into the expansion joint **prior** to the installation of the backing strip and sealant. This is particularly important in the case of water-retaining structures such as swimming pools.
- The sealant manufacturer should be consulted when advice is required on the compatibility and adhesion properties of the sealant with the **Aquachem** system.

Surfaces to be treated should be free from contaminating materials such as oils or salts. If floor and wall tanking is to be carried out, it is essential that consideration be given to the floor and wall joint. **Rotafix** provides a series of standard details to ensure that the wall/floor interface is water-tight.

- In tanking operations, **Aquachem** should not be applied over surfaces that contain running water or water under pressure, either during the time of the application or during the cure schedule. If necessary, investigations should be made as to the location of the water and suitable prior action taken such as the use of water plug or aqua-reactive polyurethane injection systems. All preliminary work must be complete and satisfactory prior to the installation of the **Aquachem** system.

- Swimming pool walls and floors are often finished with a water-proof screed containing either Sika 1A Render System, gauged SBR or acrylic additive, thus providing the finished surface for the pool which could be plastic liners, ceramic tiles or coating systems.
- To ensure that the **Aquachem** system achieves maximum bond to any finishing screeds it is essential that they are either finished with a wood float or alternatively the surface is treated after curing to provide the optimum surface conditions for the coating.
- A fully cured, correctly applied 3 coat application of **Aquachem** will withstand a minimum 5m head of water.
- The **Aquachem** system to be used should be applied and cured under controlled temperature and humidity conditions, i.e. between 10 and 25°C with a relative humidity not exceeding 60%. Inappropriate conditions are evidenced by permanent white patches in the clear primer/sealer and variegated shades in the colour coats, indicating water entrapment which will lead to de-bonding.

MIXING AND APPLICATION

- 1 **Aquachem** is a two part system. The larger bucket contains the curing agent. This should be opened and, if necessary, clean water added to the hardener component at this stage. In general, this should not exceed 500cc per 5 litre pack. In the case of certain substrates, of which terrazzo and smooth plaster finish are two, it may be necessary to add up to 1.2 litres of water per 5 litre of finished product but always the water must be added to the curing agent component only.
- 2 The contents of the base container, either clear or coloured liquid depending on the **Aquachem** product being used, are added to the hardener container. The two liquids are then mixed for a minimum of 3-5 minutes with a slow speed mixer, at no more than 200 revs per minute using a none air-entraining paddle. Suitable paddles are available from **Rotafix** (code no. 3639).
- 3 In the case of the primer/sealer system, the mixed material will appear milk- like. In a correctly applied wet film thickness of **Aquachem**, this milky appearance will disappear within one to five hours, depending on substrate absorbency, relative humidity, temperature and air movement. Permanent white patches can indicate excessive thickness of application.
- 4 The primer/sealer coat is applied with a short or medium nap industrial roller, previously wetted but not soaked with clean water, in order to initiate roller up-take of the liquid **Aquachem**.

- 5 A light mist spray of clean water onto the surface of very dry concrete often aids the initial application of the primer/sealer, although this increases the time between initial milky appearance and clearing of the coating.
- 6 For subsequent coats applied over the primer/sealer, including further coats of primer/sealer, it is essential that all areas to be over-coated are clear. Any milky spots indicate an excessive thickness of material and need to be cut out and removed before subsequent applications, otherwise they are likely to cause potential de-bonding. In the case of a waterproof membrane, failure to function is a distinct possibility.
- 7 Subsequent coatings should be applied, ideally, after the primer/sealer is fully clear and prior to full cure (loss of tack). For this reason it is strongly recommended that all operatives use standard floor-coating spiked footwear. In order to reduce foot-trafficking to the minimum during application, long-handled rollers should be used.
- 8 3 full coats of **Aquachem** are essential in tanking operations where a hydrostatic head of water is involved. All coats should be applied when the former coat is free from interstitial water but has not lost its tack, so that the coats chemically co-cure. Satisfactory results are only obtained when there is no more than 24 hours between coats. This is particularly important in the case of water-retaining structures.
- 9 **Aquachem** is ideally applied by medium nap de-fluffed rollers. Where necessary small foam radiator rollers are used for cutting in. The use of brushes is kept to a minimum and the use of brush application on walls is not recommended. If **Aquachem** treatment exceeds 500 square metres, then spray application is probably more economic although 4 diluted coats are generally required as a substitute for 3 roller coats.
- 10 If **Aquachem** is to be used below a screed, then it will be necessary to use a suitable bonding agent for the screed to successfully adhere to the cured **Aquachem**. **Aquachem** primer/sealer or PVA are suitable materials. In particular, PVA is to be used when applying sand and cement screeds to vertical walls that have been previously treated with fully cured **Aquachem**.
- 11 Where **Aquachem** is used as a waterproof membrane beneath ceramic tiles. these should be bonded to the **Aquachem** with adhesives which do not rely on suction as part of their ability to bond to the substrate. In the case of water-retaining structures, an epoxy adhesive is essential for bonding ceramic tiles to the **Aquachem**. **Rotafix Aquachem WB Adhesive** code: 3047 is recommended.
- 12 **Aquachem** primer/sealer may be used as a bond coat for cementitious and epoxy screeds.

- 13 **Aquachem** is the ideal surface membrane installed prior to fixing parquet, hardwood flooring, and laminated hardwood flooring directly to concrete or screeded surfaces **Flintag** aggregate is placed between the second and third coat of **Aquachem** to produce an increased surface area suitable for all conventional single and two pack solvent-based or solvent-free timber adhesive systems, including **Aquachem WB adhesive**.
- 14 Three coats of **Aquachem** primer/sealer have been successfully used to provide semi-decorative waterproof membranes, particularly in brick barrel vaulted constructions. However, the product is not to be considered as water-white and the final appearance will reflect the underlying texture and colour of the individual brick or masonry constructions.
- 15 **Aquachem** flakes and glass bead skid-resistant surfaces may be over-coated with a protective primer/sealer. Excessive or uneven application of the primer/sealer may result in discoloration over some **Aquachem** base colours. For maximum aesthetic effect use **Chemflor Clear** as the final coating.

LIFE CYCLE AND MAINTENANCE

- 1 The longevity of **Aquachem** depends on the specific use. In the case of application to floors and walls, the length of life will depend on the degree of abrasion and also the effect of any deliberate or inadvertent mechanical damage. In the case of water-retaining structures consideration has to be given to temperature of the water, method of water treatment (in particular the chlorination of swimming pools), the abrasive effect caused by silt in moving water conditions and the effect of crustacean abrasion in mollusc tanks.
- 2 UV influences the life of exterior epoxy coatings. This is evidenced by chalking. Controlled chalking is often used as a means of enhancing the whiteness of masonry finishes. The degree of UV effect determines the life of the coating and eventually excess chalking and consequent loss of film thickness due to powder erosion determines the life and re-coating cycle of the product.
- 3 Although swimming pools are often situated in the open air and in high UV conditions, the effect of chalking is minimised if the pool remains full of water. Premature deterioration is more likely to occur with accidental over-dosing with chlorinated products. For that reason, electrolysis-based salt treatment is to be preferred.
- 4 In the event that the **Aquachem** needs re-coating Rotafix supplies repair kits suitable for localised damage. In the case of over-coating, the existing surface should be inspected to determine if there are any

defects that have occurred in the substrate since the original application. At the same time, the surface of the **Aquachem** should be checked to ensure that any damage is limited to the effects described in 2 above. Following any necessary repairs, the whole surface should be abraded, usually by wet and dry sanding in order to produce a sound non-friable surface onto which the new **Aquachem** coating can be applied.

- 5 **Please contact our Technical Department when considering any specific over-coating applications.**

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Aquachem for use on asphalt and bituminous surfaces

The Aquachem system will if applied correctly will provide a sound waterproof membrane to clean asphalt and most sound bituminous surfaces

In the case of residual bitumen used for wood block flooring It is essential that the surface is clean and free from contaminants such grease residual diesel or petroleum and uncured /unset asphalt consult our technical department as other primers such as Rotafix P12 solvent free system may be appropriate

Scrubbing the surface to be coated using an alkaline detergent such as Janitol dilute 20:1 in warm water is very effective in removing oil and diesel contamination

Aquachem primer followed by 2 coloured coats is the standard specification Applied by short nap roller

The use of claimed bauxite or dried flintag 5 or sharp oven dried silica sand ensures a high degrees of skid resistance dependent on aggregate type and particle size specified .

The skid resistant aggregates may be sprinkled over the last Aquachem coating whilst wet or sandwiched between 1st and 2ndrd of the coloured coats

The Aquachem skid resistant system is also used for tar macadam cycle tracks running surfaces or skid resistance on general wooden ramps for horse boxes and disabled access walkways also permanent or temporary sloping walkway ramps in timber metal or concrete may be treated with Aquachem All slip resistant system available in a variety of colours

Timber

Aquachem can be satisfactorily applied as a full 3 coat system to sound timber with moisture contents of between 11 to 18 %
Prepare timber as for any normal coating application Apply primer brush out fully to produce a thin but overall application

Apply the required 2 coats of coloured Aquachem.
Aquachem will matt down under exterior weathering conditions however colour and adhesive performance to the timber substrate is excellent with typical correctly prepared pine, Douglas fir and oak construction

In the case of tropical hardwoods please contact our technical dept for further advice

Summary of Aquachem Features and Uses

Aquachem is a series of water-based 2 pack epoxy emulsion paint type coatings

Aquachem is applied in a 2, 3 or 4 coat system according to specific usage

It can be applied to dry and damp substrates

It cannot be applied where there is standing or running water as the emulsion will either be diluted or completely washed away

In tanking operations the **Aquachem** should wherever possible be on the pressure side. Examples of such situations are swimming pools and water reservoirs

It may be used on the non-pressure side of stone, concrete and cement rendered surfaces. Examples are basements and underground storage areas where ground water infiltration causes problems with the existing finishes

Aquachem will withstand a hydrostatic head of pressure

Aquachem is a tough abrasion resistant coating

Aquachem is **not** an elastomeric coating and cannot be described as flexible. The system could be damaged if there is structural movement

The preparation of any surface on to which the **Aquachem** system is to be applied is of paramount importance

The type of preparation is specific for the particular substrate

In all cases the aim is to produce a continuous Holiday free surface (pin-hole free) using a minimum of 2 coats of **Aquachem**

Brickwork - such as vaulted cellars or underground warehouses should be lightly grit blasted in order to remove 100% of any lime wash, paint or previous coatings

Where necessary re-pointing of the brickwork should be carried out with Rendacrete LW prior to the **Aquachem** treatment

Where the brickwork is friable it may be necessary to render and wood float finish to produce a surface suitable for the **Aquachem** system

Concrete – all laitance should be removed by grit blasting or scarifying. Acid etching should be avoided but if necessary all traces of acid should be removed

Any repairs to reinforced concrete must be completed before coating with the Aquachem system

For information on structural concrete repairs refer to **Rotafix Technical Bulletin CR1**

Steel – preparation of the surface should be grit blasted to SA 2.5 minimum standard.

Treated steel such as **electroplated** or **galvanised** must be degreased and treated with **Rotafix Zinc Phosphate Primer** prior to any **Aquachem** coating

Cure Schedule – Aquachem is a water based emulsion, therefore it contains water

The water has to be removed during the drying of the coating

It follows that in high humidity conditions the drying time of the **Aquachem** is extended and may be inconveniently long

In all high humidity interior situations the use of a free flowing supply of air is essential for optimum curing

Aquachem curing requires ambient temperatures of between +10 and +30 degrees centigrade.

Cure rate is governed by the following factors:

Porosity of substrate

The more absorbent the substrate, the better the physical bond. The greater the absorption, the faster the cure

The ambient temperature will govern the difficulty of application

The colder the temperature, the thicker the material, the more difficult to apply

Humidity – the higher the RH the slower the cure

On external applications a cold windy day (above 10 degrees c) will cause the Aquachem to cure faster than on a high humidity summer day

Application Advice

A close nap roller should be used wherever possible for general application

For large areas in excess of 500 square metres airless spray can be a more economic application method

Following the **Aquachem Primer** coat, second and subsequent coats should follow within 24 hours, applied at 90 degrees to the first coat

A total of 3 coats, including the **Aquachem Primer** is to be preferred

The finished coated system should be left to cure for a minimum of 7 days before filling with water or being subject to abrasive use

Finally, if in doubt about the use of **Aquachem** for any project, consult our Technical Department.

For reference please read the following data sheets:

Aquachem (codes 3001 - 3040)

Aquachem WB Adhesive (code 3047)

Aquachem WB (Injection) Adhesive (code 3532)

Flintag (code 3606)

Rendacrete LW (code 3401)

Rotaflex one part moisture curing Joint Sealant (code 3474)

SBR Polybond (codes 3460, 3465)

Timberiset (code 3553)

Chemflor Clear (code 3340)



AQUACHEM® WB ADHESIVE

- PRODUCT CODE:** 3047 - 1 Litre
- DESCRIPTION:** **AQUACHEM WB ADHESIVE** is a 2-pack water based epoxy resin system.
- SPECIFIC USES:** **AQUACHEM WB ADHESIVE** can be used for the fixing of ceramic and stone tiles or pavements to concrete or cementitious renders. It is suitable for swimming pool applications.
- PACKAGING:** **AQUACHEM WB ADHESIVE** is supplied in two containers, the contents of which, when mixed, will yield 1 litre.
- PREPARATION OF SUBSTRATE:** Concrete or rendered cementitious surfaces should be clean and free from laitance or other deleterious substances.
- MIXING:** The contents of the **AQUACHEM** Base container should be added to the contents of the **AQUACHEM** Hardener container and mixed thoroughly with a suitable spatula for 2 or 3 minutes to produce a trowelable semi-thick cream.
- APPLICATION AND EQUIPMENT:** The Adhesive can be applied to stone, brick, concrete, asphalt, ferrous surfaces and some non ferrous substrates. The normal thickness should not exceed 5mm. Do not mix, apply or use at temperature below +5°C.
- CURE SCHEDULE:** Cure times are dependent upon temperature and relative humidity. Initial cure 4-12 hours at +20°C and relative humidity of 40% or less. Full cure 7 days at 20°C.
- MATERIAL USAGE/ COVERAGE:**
- | | | |
|--------------------------|--|-------------------------|
| CURED PROPERTIES: | Compressive Strength: 25N/mm ² | S.G. approximately: 1.5 |
| | Flexural Strength: 13N/mm ²) Provisional | |
| | Tensile Strength: 17N/mm ²) | |
| | Standard Colour: Off White | |
- Chemical Resistance - unaffected by a wide range of industrial and domestic chemicals. For specific application, please consult our Technical Department.
- APPROVAL:** **AQUACHEM WB ADHESIVE conforms to the Water Research Council test requirements of BS 6920 for use in potable water situations.**
- CLEANING OF TOOLS:** Uncured **AQUACHEM WB ADHESIVE** may be readily removed with warm water and soap. Mechanical methods are required to remove cured material.

The site conditions and equipment required when using individual Rotafix products are specific for each project. Only advice given by Rotafix in writing will be considered as part of our contractual liability.

Epoxy resins and their associated curing agents can cause irritation to some people. Please take the necessary precautions indicated in the COSHH details available from our offices. Please read our Users Safety Guide on the Handling of Resin and Polymer products.

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PD3047/10



AQUACHEM WB (INJECTION) ADHESIVE

- PRODUCT CODE:** 3532 400cc
- DESCRIPTION:** **AQUACHEM WB (INJECTION) ADHESIVE** is a 2 pack water based epoxy emulsion system
- SPECIFIC USES:** **AQUACHEM WB (INJECTION) ADHESIVE** can be used for the fixing of ceramic and stone tiles or pavements to concrete or cementitious renders. It is suitable for swimming pool applications.
- PACKAGING:** **AQUACHEM WB (INJECTION) ADHESIVE** is supplied in two screw cap containers, one contains the base resin the other contains the curing agent. Included is a follower plate and empty cartridge assembly. Can be supplied in 10 litre industrial size packs (special order and mixing instructions).
- Mixing knife Ref:3642. 400cc Skeleton Gun Ref:3667. Available from Rotafix.*
- PREPARATION OF SUBSTRATE:** All surfaces should be clean and free from laitance or other deleterious substances.
- MIXING:** Add the total contents of the smaller container 'Base' to the contents of the larger container 'Hardener'. Mix thoroughly, ideally using mixing knife reference:3642. Place the follower-plate onto the surface of the mixed material ensuring it fits parallel in the tub with the outer and central lip pointing upwards. Cut the seal from the front end of the cartridge sleeve. Place the back end of the cartridge vertically and centrally over the hole in the follower-plate. Press the cartridge firmly and continuously down on the follower-plate until the follower-plate bottoms on the mixing tub base. Carefully remove and invert the now full cartridge. Screw on the front injection nozzle and insert the rear plunger.
- APPLICATION AND EQUIPMENT:** The adhesive can be applied to stone, brick, concrete, asphalt, ferrous surfaces and some non ferrous substrates. The normal thickness should not exceed 5mm. Do not mix, apply or use at temperature below +5°C or when the temperature is likely to fall below +5°C during the cure schedule.
- CURE SCHEDULE:** Cure times are dependent upon temperature and relative humidity. Initial cure 4 - 12 hours at +20°C and relative humidity of 40% or less. Full cure 7 days at 15 - 18°C.
- MATERIAL USAGE/ COVERAGE:** e.g. joints 5mm x 10mm require 50cc/linear meter
i.e. 1 litre produces 20 linear meters of 5mm x 10mm joint
- CURED PROPERTIES:**
- | | | |
|-----------------------|-----------------------------------|--------------------------|
| Compressive Strength: | 25N/mm ² | S.G. approximately: 1.35 |
| Flexural Strength: | 13N/mm ²) | |
| Tensile Strength: | 17N/mm ²) provisional | |
| Standard Colour: | Off White | |
- Chemical Resistance - unaffected by a wide range of industrial and domestic chemicals. For specific application, please consult our Technical Department.
- CLEANING OF TOOLS:** Uncured **ROTAFIX AQUACHEM WB INJECTION ADHESIVE** may be readily removed with warm water and soap. Mechanical methods are required to remove cured material.

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FLINTAG

PRODUCT CODE: 3606

DESCRIPTION: Angular crushed dried Thames flint. 97% crystalline silica.
Dried graded and dust free.

SPECIFIC USES: Skid resistance - pedestrian and vehicular, roads, bridge decks, service ramps.

PACKAGING: Available per kilogram and 25kg sacks.

PREPARATION OF SUBSTRATE: Depends upon use.

MIXING: Maybe added to flooring compounds to improve wear. Or broadcast onto the surface of resin coatings.

APPLICATION AND EQUIPMENT: Depends on use, normally broadcast into wet resin systems during cure cycle.

CURE SCHEDULE: Depends upon surface on to which flintag is applied, normally 24 hours before excess material is removed.

MATERIAL USAGE/ COVERAGE: As a "Broadcast to excess system" on floor surfaces 3 kg/m².
Otherwise approximately 200-300 gms/m² as a skid resistant dressing.

CURED PROPERTIES: Extremely hard skid resistant surfaces, wear depends upon the resin/cement surface to which the flintag adheres

CLEANING TOOLS: Not applicable

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RENDACRETE® LW

PRODUCT CODE: 3401

DESCRIPTION: RENDACRETE LW is a prepacked, preweighed powder mix containing graded cements, aggregates, accelerators and polymers. The material does not contain calcium chloride.

SPECIFIC USES: RENDACRETE LW is specifically formulated for use as a concrete repair material in vertical and overhead situations. In many cases the 'high build' nature of the material enables work to be carried out without shuttering.

PACKAGING: 18kg in plastic buckets/sacks yield approximately 14.5 ± 0.5 litres when mixed with 2.8 - 3.0 litres of water.

PREPARATION OF SUBSTRATE: All concrete surfaces should be clean and free from laitance. Steel surfaces should be free from rust, grease and millscale.

MIXING: We strongly recommend that the whole of the contents are used in one mix in, say, 15-25 litre keg or tub, using a slow speed mixer and paddle, information on which is available from our Technical Department.

APPLICATION AND EQUIPMENT: Apply the required primer to all concrete surfaces to be treated with mortar including all reinforcing steel. Apply and compact the mortar within 30-50 minutes of mixing and whilst the primer is still wet, trowel to a smooth surface. On no account should further water be added to reconstitute mixed RENDACRETE LW.

The general rules with regard to temperature and curing should always be observed with cementitious systems. If in doubt, consult our Technical Department.

CURE SCHEDULE: Conventional curing membranes may be applied when the mortar has set.

MATERIAL USAGE/ COVERAGE: 1 litre covers 1m² at 1mm thickness.

CURED PROPERTIES: Compressive strength - BS 1881, Part 116

Age (days)	Compressive Strength (N/mm ²) at +20°C
1	12 - 16
7	23 - 28
28	26 - 32

Flexural strength - BS 1881 at +20°C 5N/mm² at 28 days

APPROVAL: RENDACRETE LW conforms to the Water Research Council Test Requirements of BS 6920 for use in potable water situations.

CLEANING OF TOOLS: Uncured RENDACRETE LW and SBR POLYBOND may be readily removed from tools and equipment with clean water.

The site conditions and equipment required when using individual Rotafix products are specific for each project. Only advice given by Rotafix in writing will be considered as part of our contractual liability.

ROTAFIX cementitious based products are mildly alkaline. Users should take the necessary precautions indicated in the COSHH details available from our offices. Please read our Users Safety Guide on the Handling of Resin and Polymer products.

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ROTAFLEX ONE PART MOISTURE CURING JOINT SEALANT

PRODUCT CODE: 3474

DESCRIPTION: Polyurethane sealant - one component - Joints are elastic, resistant to exposure and ageing. Achieves adhesion on various substrates without primer, such as glazed and unglazed ceramic, anodized aluminium, porcelain enamel and stainless steel. Tests should be carried out on actual substrates.

SPECIFIC USES: Sealing of joints between concrete, masonry, wood, metal, plastics, ceramics, aluminium, stainless steel

PACKAGING: 310 cc cartridges including nozzle. (Remove back metal seal before inserting into gun.)

PREPARATION OF SUBSTRATE: All surfaces must be firm, dry and free from grease or dust. We recommend cleaning with Methylethylketone. Rust and loose paint should be removed as they reduce adhesion. Tar and bituminous surfaces are not suitable substances for adhesion.

MIXING: Not Applicable

APPLICATION AND EQUIPMENT: Apply by hand, skeleton or air pressure gun. Smoothing, if necessary, must be effected before skin formation. Suitable tool moistened with water detergent mix is preferred.

CURE SCHEDULE: Change of volume (DIN 52451): approximately 5%
Application temperature range: +5° to +35°C
Cure time at room temperature 23°C @ 50% RH: approximately 2mm per day

MATERIAL USAGE/ COVERAGE: E.g. joint 10mm x 10mm uses 100cc/linear metre. i.e. 3.2 linear metres per cartridge. No allowance for wastage.

CURED PROPERTIES: Specific gravity: approximately 1,2
Shore-A-Hardness: approximately 21°
Modulus at 100% elongation (DIN 52455): 0.35 N/mm²
Recovery/Resilience (DIN 52458): >80% Total deformation: 20%
Service Temperature range: -30° to 70° (up to 90°C for short durations)
Paintability: not recommended.

CLEANING TOOLS: Uncured Rotaflex joint sealant may be removed from tools and equipment with M.E.K. Mechanical methods are required to remove cured material.

The site conditions and equipment required when using individual Rotafix products are specific for each project. Only advice given by Rotafix in writing will be considered as part of our contractual liability.

Polyurethane can cause irritation to some people. Please take the necessary precautions indicated in the COSHH details available from our offices.
Please read our Users Safety Guide on the Handling of Resin and Polymer products.

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PRODUCT CODE: 3460 - 5 litre pack. 3465 - 25 litre pack.

DESCRIPTION: **SBR POLYBOND** is a styrene/butadiene latex in an aqueous base of pH 10.8 all specifically designed for use in cementitious products.

SPECIFIC USES: The undiluted material may be used to improve the adhesion of cement renders to their substrates. The liquid may be added to concrete and render mixes in varying proportions in order to produce thin layers, improve water resistance, improve water vapour resistance, increase flexibility, enhance chemical resistance of cementitious products and improve vehicular wear to floor surfaces.

PACKAGING: In 5 litre and 25 litre non-returnable plastic containers.

PREPARATION OF SUBSTRATE: Anti foam agents:
These should be added at the rate of 5ccs/3 litres of materials on site immediately prior to use.

MIXING: It is essential that the sand and cement is dry mixed in a horizontal pan mixer. Thereafter **SBR POLYBOND** is added. Mixing should then continue for between 1 and 3 minutes with the addition, if necessary, of a small amount of water according to the moisture content of the aggregates. Excessive mixing is to be avoided as the plasticising action of the polymer and water may cause an 'over wet' mix. If the material is to be laid as a floor, then normal good concrete practice is to be carried out in terms of curing. Rapid drying out and draughts are to be avoided.

APPLICATION AND EQUIPMENT: Depends upon specific use. Consult our Technical Department for further information.

CURE SCHEDULE: Depends upon specific use. Consult our Technical Department for further information.

MATERIAL USAGE/ COVERAGE: See formulations below.

CURED PROPERTIES: Varies according to cure, typical examples identified below.

<u>1. 12mm Heavy Duty Flooring Topping</u>		<u>2. Sand & Cement Upgraded System</u>	
O.P.C.	50kg	Sharp Sand	150kg
Zone 2 Sand	60kg	O.P.C.	50kg
6mm Granite	60kg	Rotafix SBR	9lt
Rotafix SBR	8lt	Water to Adjust	
Water to adjust			

3. Waterproofing Renders

These will vary dependent upon water pressures. In general, the ratio of 12 litres of Rotafix **SBR POLYBOND** to 50kg of cement may be used as a starting point. In all of the above cases, a primer should be applied to the substrates and this will consist of one part OPC to one part of Rotafix **SBR POLYBOND** mixed well and applied as a creamy consistency. The topping must be added while the primer is still wet.

CLEANING OF TOOLS: Uncured **SBR POLYBOND** may be readily removed from tools and equipment with clean water.

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Rotafix aqueous based polymer materials do not normally present a hazard. However, the normal precautions when handling aqueous polymers include the use of gloves and protection to the face and eyes from splashes. In the event that splashing occurs, apply copious amounts of water.

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RESIWOOD® SYSTEM TIMBERSET



PRODUCT CODE: 3553 - 400cc

DESCRIPTION: TIMBERSET is a 2-part thixotropic epoxy adhesive. It may be used in film thicknesses between 0.25mm and 12mm. TIMBERSET is specifically formulated for timber engineering

SPECIFIC USES: High strength timber adhesive with low surface tension. (20 dynes/cm²). Anchorages in timber (bond stress 6N/mm²). TIMBERSET can be used with timber having a moisture content up to but not exceeding 20%. For further information on TIMBERSET please contact our Technical Department.

PACKAGING: TIMBERSET is supplied in 2 screw cap containers, one contains the base resin the other contains the curing agent. included is a follower plate and empty cartridge assembly.

Mixing knife Ref:3642. 400cc Skeleton Gun Ref:3667. Available from Rotafix.

PREPARATION OF SUBSTRATE: Timber surfaces should be clean, free from dust, loose or friable particles. Where timber preservatives are involved, please consult our Technical Department.

MIXING: Add the total contents of the smaller container (hardener) to the contents of the larger container (base). Mix the two pastes thoroughly ideally using mixing knife reference: 3642. Place the follower-plate onto the surface of the mixed material ensuring it fits parallel in the tub with the outer and central lip pointing upwards. Cut the seal from the front end of the cartridge sleeve. Place the back end of the cartridge vertically and centrally over the hole in the follower-plate. Press the cartridge firmly and continuously down on the follower-plate until the follower-plate bottoms on the mixing tub base. Carefully remove and invert the now full cartridge. Screw on the front injection nozzle and insert the rear plunger.

APPLICATION AND EQUIPMENT:

- Crack injection or the filling of drilled holes.*
Install the full cartridge of timberset into skeleton gun reference:3667. Screw nozzle onto front of cartridge. Fix appropriate size injection tube onto cut end of front nozzle.
- For spreader application as an adhesive dispense directly from the cartridge without the aid of the front nozzle.*

CURE SCHEDULE: Rate of cure and exotherm will be related to ambient temperature, material temperature and volume of material installed. As a guide, pot life is approximately 40 minutes for 400ccs at +20°C. TIMBERSET will cure at temperatures down to -5°C.

MATERIAL USAGE/COVERAGE: 1 litre covers 1m² at 1mm thick. See ROTAFLEX ROD Data Sheet PD3644 for material requirements when installing anchorages.

CURED PROPERTIES: Compressive Strength: >50N/mm² Tensile Strength: 18N/mm² (provisional)
Youngs Modulus: 5,000 N/mm²
May be sanded and stained or treated with intumescent coatings.

CLEANING OF TOOLS: Uncured TIMBERSET may be readily removed with Rotafix s200 PC Solvent Cleaner. Mechanical methods are required to removed cured material.

The site conditions and equipment required when using individual Rotafix products are specific for each project. Only advice given by Rotafix in writing will be considered as part of our contractual liability.

Epoxy resins and their associated curing agents can cause irritation to some people.
Please take the necessary precautions indicated in the COSHH details available from our offices.
Please read our Users Safety Guide on the Handling of Resin and Polymer products.

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RESIWOOD and TIMBERSET are Registered Trade Marks of Rotafix (Northern) Ltd

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PD3554/8**



CHEMFLO CLEAR

- PRODUCT CODE:** 3340 - 1 litre pack. 3345 - 5 litre pack
- DESCRIPTION:** **CHEMFLO CLEAR** is a 2-part unfilled low viscosity liquid epoxy system.
- SPECIFIC USES:** Suitable for sealing epoxy screeds and forming a hard colour stable clear finish on/over Aquachem flake system, decorative panels and epoxy screeds. Heavy Duty sealer for timber and concrete floors. Also can be used for low viscosity injection of fissures in timber stone and concrete.
- PACKAGING:** **CHEMFLO CLEAR** is supplied in two containers, the larger container is used as a mixing vessel.
- PREPARATION OF SUBSTRATE:** All surfaces should be clean and free from dust moisture and grease. For low viscosity injection cracks and fissures should be treated by air blast or vacuum in order to remove loose or friable dust. For detailed information on injection technique and preparation, see our Technical Bulletin CR3.
- MIXING:** The contents of the hardener (curing agent) are poured slowly into the base resin container. The two liquids are mixed thoroughly with a pallet knife Ref:3642 for the 1 litre pack. The 5 litre pack requires mixing with a drill and paddle Ref: 3639.
- APPLICATION AND EQUIPMENT:** **CHEMFLO CLEAR** can be applied by brush, roller or squeegee. For low viscosity injection **CHEMFLO CLEAR** is invariably installed using low pressure injection equipment. Rotafix has available suitable ancillary equipment see our Technical Bulletin CR3.
- CURE SCHEDULE:** Rate of cure and exotherm is related to ambient temperature and the volume of material mixed. As a guide 1 litre of mixed **CHEMFLO CLEAR** should be used within 30 minutes @ 20°C. For information on extended cure grades, please contact our Technical Department. Full cure is achieved after 5-7 days at +20°C. Do not use at temperatures less than +8°C.
- MATERIAL USAGE/ COVERAGE:** The volume is as stated on the packs. As a guide a 1 litre pack brushed on to a none absorbent surface eg. Smooth metal will cover 8m². For Low viscosity injection the volumes are as stated on the packs. As a guide, 1 litre would inject 20 linear metres of crack 2mm wide x 25mm deep.
- CURED PROPERTIES:** Compressive Strength: >50N/mm²
Specific Gravity: 1.1
Tensile Strength: 17N/mm²) Provisional
Flexural Strength: 32N/mm²)
- CLEANING OF TOOLS:** Uncured **CHEMFLO CLEAR** may be readily removed from tools and equipment with Rotafix **S200 PC** Solvent Cleaner. Mechanical methods are required to remove cured material.

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