



rotafix ®

Product Catalogue



Rotafix Ltd

**Rotafix House, Abercraf, Swansea SA9 1UR U.K.
Tel: +44 (0)1639 730481 Fax: +44 (0)1639 730858**

Email: sales@rotafix.co.uk

Website: www.rotafix.co.uk

Introduction

Welcome to the Rotafix® Product Catalogue. I would like to start by explaining why you can trust the Rotafix® product range.

Originally, Rotafix® were contractors directly involved in masonry repairs, structural restoration, timber preservation and upgrading. With our direct experience of being 'at the coal face' we know how the products need to perform.

We have been directly involved in the development and application of adhesives and coatings for over 30 years. There are now a number of engineers and contractors who will only specify Rotafix® adhesives as they know they can rely on our products and advice.

Rotafix® products are high performance, either water based or solvent free. We believe that it is very important that we protect the environment as well as you and your team when using our products.

Our products are used across the world. We have undertaken projects throughout the UK, Europe, North America and the Far East. We have an extensive network of approved contractors and offer training to ensure that we can guarantee the performance of our products. We also offer Continuous Professional Development (CPD) Training to ensure that the engineers, architects and others involved in specifying building design are up to date with the Rotafix® developments which conform to the latest technology.

Rotafix® are committed to the development of new techniques for timber repair. We work closely with Timber Research and Development Association (TRADA), GLULAM Association, Institute of Wood Science and a number of academic institutions including the Universities of Bath and Swansea. Our products have been extensively tested and verified by independent bodies both in the UK and EU.

We are committed to our continuing policy of sustainability as we consider that it will not only protect our heritage and historic buildings, but offer a cost effective and environmentally sound approach to building maintenance that can be used equally well on industrial and domestic properties.

We pride ourselves on our technical support and advice and feel that this is the key difference between Rotafix® and our competition. We will directly assist you through every step of design, from development to the completion of your project.

We look forward to working with you.

Dave Smedley
Technical Director

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Adhesive Selector	Timberset® Adhesive	RSA Rotafix® Structural Adhesive	TG6 Timber Grout	CB10T Adhesive	Anchor Grout	Engineering Adhesive
Filled	Yes	No	Yes	No	Yes	No
Thixotropic Gel	✓	✓	✗	✓	✗	✓
Viscous Liquid	✗	✗	✓	✗	✓	✗
Slow Cure	✗	✓	✗	✗	✗	✓
Fast Cure	✓	✗	✓	✓	✓	✗
Poured	✗	✗	✓	✗	✓	✗
Pumped	✓	✓	✓	✓	✓	✓
Bonds Anchors	✓	✓	✗	✓	✓	✓
Bonds CFRP	✓	✓	✓	✓	✓	✓
Bonds GFRP	✓	✓	✓	✓	✓	✓
Bonds Glass	✗	✓	✗	✓	✗	✓
Bonds Masonry	✗	✓	✗	✓	✓	✓
Bonds Metal	✓	✓	✓	✓	✓	✓
Bonds Rubber	✗	✗	✗	✗	✗	✓
Bonds Greenheart Timber	✓	✓	✓	✓	✗	✓
Bonds Wood	✓	✓	✓	✓	✗	✓
Fills Cracks and Fissures	✓	✓	✓	✓	✓	✓
Fire Rated	✗	✗	✓	✗	✗	✗
Flexible	✗	✓	✗	✗	✗	✓
Masonry Stitching	✗	✓	✗	✓	✗	✓
Stainable	✓	✓	✗	✓	✗	✓
Paintable	✓	✓	✓	✓	✗	✓
Form with tools	✓	✓	✓	✓	✗	✓
High Humidity	✓	✓	✓	✓	✗	✓
Variable Temperature	✓	✓	✓	✓	✗	✓

✓ Suitable for this application

✗ Not suitable for this application

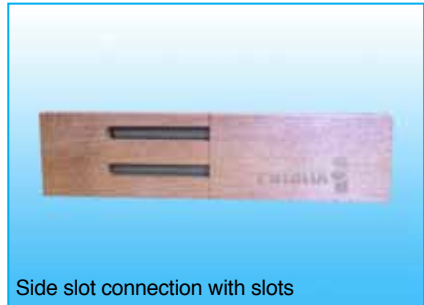
Examples of Resiwood® Solutions



TG6 bonded in rods



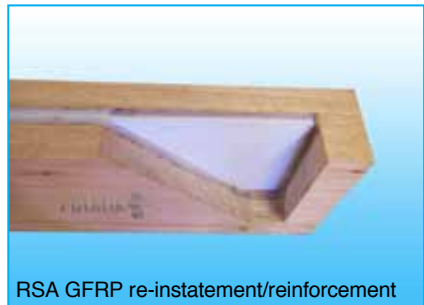
TG6 rebar re-instatement/reinforcement



Side slot connection with slots



Corner Joint with RSA GFRP



RSA GFRP re-instatement/reinforcement



RSA GFRP rods in glulam beam repair



CFRP reinforcement

Timber Adhesives, Grouts & Adhesives

Rotafix® offer a comprehensive range of high performance structural adhesives, grouts, consolidating liquids and adhesives for timber construction. These are specifically designed for engineering, restoration, maintenance repairs and upgrading of timber.

The products are environmentally friendly and solvent free. Products vary in curing schedule and rheology to suit your needs.

RSA Thixotropic Epoxy



RSA is a slow setting timber structural adhesive that can be pumped or injected horizontally and vertically. It is a gap filling thick film adhesive suitable for:

- Bonding rods
- Anchors and fixings
- Crack injection
- Glulam structure upgrades
- Stressed skin structures
- Gap fill 0.5-12mm

Compressive Strength >60N/mm²
Tensile Strength 38N/mm²
Tensile Modulus 2GPa
Flex Strength 70N/mm²
Bond Strength 6-10N/mm²
Specific Gravity 1.1
Workable for 6 hours at 20°C
Sizes 400cc, 3 litre

TG6 Structural Pourable Grout



TG6 is a free-flow timber epoxy grout used to replace damaged timber and to strengthen timber in conjunction with pultrusions. TG6 is the only epoxy grout on the market which has a fire resistance certificate (1987).

- Very searching
- Pourable
- Pumpable

Compressive Strength >50N/mm²
Tensile Strength 17N/mm²
Tensile Modulus 9GPa
Flex Strength 32N/mm²
Bond Strength 3N/mm²
Specific Gravity 1.65
Workable for 50 minutes at 20°C
Sizes 2.5 litre, 7.5 litre

CB10T Epoxy Adhesive



CB10T is a fast setting 2-part thixotropic adhesive designed specifically for timber engineering.

- High strength
- Thick or thin film
- Good for flat sections
- Laminating

Compressive Strength >50N/mm²
Tensile Strength 17N/mm²
Tensile Modulus 7GPa
Flex Strength 34N/mm²
Bond Strength 4N/mm²
Specific Gravity 1.1
Workable for 30 minutes at 20°C
Size 400cc

Adhesives & Grouts for Timber Restoration



Engineering Adhesive Thixotropic Epoxy



Engineering Adhesive is a slow setting timber structural adhesive with a low modulus designed for high strength where a degree of flex is required. Ideal for high humidity areas. Suitable for:

- Bonding rods and joints
- Low modulus situations
- Upgrading glulam
- High performance
- Great in high humidity

Compressive Strength $>60\text{N/mm}^2$
 Tensile Strength 40 N/mm^2
 Tensile Modulus 3GPa
 Flexural Strength 70N/mm^2
 Bond Strength 6N/mm^2
 Specific Gravity 1.1
 Workable for 6 hours at 20°C
 Sizes 400cc, 3 litre

Timberset® Thixotropic Epoxy



High strength timber adhesive with low surface tension, ideal for bonding anchorages in timber.

- Fast setting
- Anchors
- Thick film 1-12mm
- Can be sanded
- Stainable

Compressive Strength $>50\text{N/mm}^2$
 Tensile Strength 18 N/mm^2
 Tensile Modulus 2.4GPa
 Flexural Strength 70N/mm^2
 Bond Strength $6-10\text{N/mm}^2$
 Specific Gravity 1.2
 Workable for 6 hours at 20°C
 Size 400cc

TM3 Epoxy Moulding Mortar



2-part epoxy mouldable mortar for filling fissures and repairing damaged wood, it can be painted, varnished and stained. TM3 can be shaped when fully cured.

- Mouldable filler
- Paint, stain and varnish
- No shrinkage
- Soft or hardwood suitable
- Fills holes and voids

Compressive Strength 4.5N/mm^2
 Specific Gravity 0.8
 Flexural Strength $\sim 27\text{ N/mm}^2$
 Available in modules of 4×2 litre
 Profiling 4-24 hours after application
 Size 2 litre pack

Carbon Fibre for Strengthening & Upgrading Timber

Rotafix® Carbon Fibre Reinforced Product (CFRP) composite technology is a combination of carbon fibre and Rotafix® specially formulated adhesive.

Carbon has high strength and rigidity and exhibits good flexural stress behaviour in both static and dynamic loading situations.

The inert nature of the CFRP offers excellent corrosion resistance and is unaffected by wood tannin, solvent or aqueous timber preservation treatments.



Carbon Plates



Carbon Plates

- Repairs to delaminated timber components
- Strengthening and upgrading
- Rotafix TRS patented beam end repairs
- Timber repairs
- Joints
- TG6, RSA, CB10T and Timberset® are compatible adhesives

Compressive Strength 10000Mpa

Tensile Strength 2.6GPa

Tensile Modulus 155GPa

Shear Strength 70MPa

Glass content by volume 50-75%

Can be supplied in up to 5 metre lengths

Size 50mm wide x 2mm thick

Glass Fibre for Strengthening & Reinforcing

Rotafix® Glass Fibre Reinforced Product (GFRP) composite technology has been specifically designed for the fabrication of continuous fibre composites via a pultrusion process.

GFRP supplied by Rotafix® is supplied in plates, strips or rods to suit the application. The high strength and rigidity make ideal reinforcement materials and good flexural stress behaviour lends itself to timber.

The inert nature of the GFRP offers excellent corrosion resistance and is unaffected by wood tannin, solvent or aqueous timber preservation treatments.



Rods

- Repairs to delaminated timber components
- Strengthening and upgrading
- Beam end repairs
- Timber repairs
- TG6, RSA, CB10T and Timberset® are compatible adhesives

Tensile Strength 1000MPa

Flexural Strength 1000MPa

Supplied as polyester, vinyl ester, or epoxy matrix containing unidirectional glass

Standard length 2.5m

Sizes available 5, 8, 10, 12, 16, 20mm diameter



Plates

- Joints
- Strengthening and upgrading
- Beam end repairs
- Timber repairs
- TG6, RSA, CB10T and Timberset® are compatible adhesives

Compressive Strength 450Mpa

Flexural Strength 1000MPa

Tensile Modulus 40000MPa

Shear Strength 20-40MPa

Glass content by volume 50-75%

Can be supplied in up to 5m lengths

Sizes 100mm x 4mm

PyroProtect® Fire Retardant Wood Stain

Pyroprotect is a wood stain that can be brush, spray or cloth applied in situ to provide Euroclass B-s1, dO Fire Retardancy Standard. There is no requirement for pressure treatment or specialist equipment.

Pyroprotect is a unique formulation based on Carbonic Acid Salts and Carbamide acrylate polymer carriers that provide excellent protection, not only against fire, but also against weathering, fungi and insect attack.

Pyroprotect is VOC solvent free and does not emit carcinogenic or other harmful substances during application or in service.

Translucent and tinted colours are available and compatible with all timber types. Pyroprotect will prevent “greying” of in situ timber which is exposed to the elements.

Pyroprotect is the answer for retaining the natural wood effect and the required fire retardancy.

With coverage of 5-6 m² per litre per coat, Pyroprotect is a cost effective option for in situ fire protection treatment.

Borotreat 10P For Timber Preservation

Borotreat 10P is 100% disodium octaborate tetrahydrate (DOT) concentrate which may be diluted with water. The treatment will protect against insect and fungicidal attack. The solution can be applied using a brush, spray or micro-blower.

- Dry rot is treated with a concentration of 100 grams of powder to 1 litre of water, giving a concentration of 12.2%. Typical coverage would be 1 litre per 5m².
- Woodworm is treated with a concentration of 100 grams of powder, in 2.5 litres of water, 4.76% concentration. Typical coverage would be 1 litre per 4m².
- As a fungicidal treatment, coat all surfaces with a concentration of 4.76%, i.e. 100 grams of powder in 2.5 litres of water.
- Complies with COPR 1986 HSE No 6335/6133. 8 hour personnel re-entry applies to all treatment schedules.

Damp Proofing & Sealers

Rotafix® offer a complete range of waterproofing and sealing products. Their water based nature makes them ideal for food preparation areas and chemical and industrial applications. Products are available in a range of clear and coloured solutions and can be mixed with aggregates to make skid resistant surfaces.



Aquachem® 2-part epoxy coating



Aquachem® is a water miscible 2-part epoxy solution that can be used as a damp proof membrane, tanking solution or a floor coating. Suitable for:

- Food preparation areas
- Potable water tanks
- Chemical resistant
- Swimming pools
- Skid resistant surfaces using Dynagrip

Coverage Concrete 3-4m²/litre,
4-5m²/litre steel or timber
5-10 hours between coats
Traffic ready 24-72 hours
Use in conjunction with
Aquachem® Primer
Size 5 litre

Aquachem® Primer Primer



Aquachem® Primer is a 2-part unfilled water miscible epoxy surface sealer. It may also be used to prepare a decorative finish. Suitable for:

- Primer
- Sealer
- Used as decorative top coat with flakes

Coverage Concrete 4-5m²/litre
5-10 hours to dry
Size 4.5 litre

Chemflor (CR) Epoxy Sealer and floor finish



Chemflor is a 2-part unfilled low viscosity liquid epoxy sealing solution for timber, concrete and stone. Chemical resistant.

- Heavy duty sealer
- Clear finish on Aquachem® flake system
- Acid resistant (CR)

Compressive Strength >50N/mm²
Tensile Strength 17N/mm² after
5 days @ 20°C
Workability/pot life 30 minutes
at 20°C
Coverage 8m²/litre on non-porous
surface
Specific Gravity 1.1
Size 2 litre

Masonry Preparation & Repairs

Rotafix® offer a complete range of adhesives, grouts, sealants, screeds and consolidating liquids for masonry applications. Products are water based or solvent free.



RSA Injectable adhesive



RSA is a slow setting, high strength structural adhesive. Its thixotropic consistency means it can be injected. It will also fill gaps and provide excellent bonding.

- Wall ties
- Crack stitching
- Anchors
- Thixotropic
- Gap Filling
- High Strength
- Low Modulus

Compressive Strength >60N/mm²
Tensile Strength 38N/mm²
Tensile Modulus 2GPa
Flex Strength 70N/mm²
Bond Strength 6-10N/mm²
Specific Gravity 1.1
Workable for 6 hours at 20°C
Sizes 400cc, 3 litre

CB10T Fast setting adhesive



CB10T is a fast setting 2-part thixotropic epoxy adhesive. The high strength adhesive is ideal for applications where speed is important.

- Fast setting
- Thixotropic
- Gap filling
- High strength
- Injectable

Compressive Strength >50N/mm²
Tensile Strength 17N/mm²
Tensile Modulus 7GPa
Flex Strength 34N/mm²
Bond Strength 4N/mm²
Specific Gravity 1.1
Workable for 30 minutes at 20°C
Sizes 400cc, 3 litre

Rendacrete® LW Concrete repair



Rendacrete® is a mixture of cements, aggregates, accelerators and polymers. Rendacrete® LW is ideal for the repair of concrete. Use in conjunction with P12 Primer.

- Vertical or overhead
- High build
- Approved for potable water BS6920
- Can be used with membranes

Compressive Strength 26-32N/mm²
Flexural Strength 5N/mm²
Coverage 1 x 25kg covers 2m² at 10mm thickness
Size 25kg

Masonry Preparation & Repairs

Rotafix® offer a complete range of products for preparing, sealing, repairing, coating concrete and masonry substrates. Our products are water based, solvent free and offer cost effective high performance solutions to many construction problems.



Stone Repair Putty Mouldable Mortar



Stone Repair Putty is a 2-part repair mortar. This product when mixed can be moulded or carved to represent natural stone or carpentry. It is suitable for vertical and overhead application.

- Concrete repair
- Lightweight mortar
- High build
- Tools may be cleaned with water

Minimum Compressive Strength
5N/mm² after 7 days

Coverage 2 litre will cover ½m²
at 4mm thick

Working life 15 minutes

Size 2 litre

RM20 LW Epoxy Mortar



RM20 LW is a lightweight repair mortar suitable for repair to reinforced concrete. Suitable for vertical and overhead application.

- Can be colour matched
- Lightweight mortar
- Suitable for potable water situations
- Chemical Resistant
- Water Research Council (WRC) approved

Compressive Strength 25N/mm²

Coverage 2.5 litre will cover ½m²
at 5mm thick

Initial Cure 4-12 hours

Final cure 5-7 days

Sizes 2.5 litre, 10 litre

P12 Primer Surface Tack Primer



P12 Primer is a solvent free 2-part unfilled epoxy liquid used to apply to prepared surfaces prior to the application of epoxy mortars and screeds.

- Potable water version available
- Bonds new concrete to old
- Use in conjunction with RM20 and Rendacrete®

Coverage 1 litre per 3m² on
concrete, 5m² on steel

Pot life 20/30 minutes per 100g

Full cure 7 days at 20°C

Water Research Council
Approved to BS6920

Sizes 250cc, 0.5 litre, 1 litre and
5 litre

Masonry Preparation & Repairs

Rotafix® offer a range of complementary products for the preparation, repair and maintenance of concrete and masonry substrates. We also provide solutions for anchoring and bonding metal into concrete.



HA Slurry Primer



HA Slurry primer is a formulated acrylic powder cementitious based coating combination used to protect steel reinforcement prior to concrete repair.

- Fast setting
- Cleanable with water
- Chemically resistant
- Anti-corrosive

Coverage 1.25kgs with 500cc of water covers 1m² at 1mm thick

Ready to over coat in 30-60 minutes

Size 1 litre (1.25kgs)

Zerose[®] Anchor Grout



Zerose[®] is a high performance anchor grout, Department of Transport (DoT) Approved for bonding anchors into rotary percussive or diamond drilled holes.

- Sets under water
- Parapet anchoring
- Street lighting standards
- Inert
- Sets at 0°C
- Solvent free

Compressive Strength 70N/mm²

Tensile Strength 16N/mm²

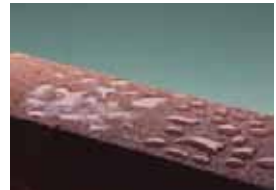
Flexural Strength 32N/mm²

Workability 20 minutes

Full cure 20-24 hours

Size 500cc

Vinachem[®] Polymer Sealer



Vinachem[®] is an aqueous polymer solution of fine acrylic particles. The liquid offers maximum penetration into concrete, masonry and brick to provide a water resistant polymeric barrier.

- Penetrative
- Consolidates loose and friable surfaces
- One coat only
- Brush, roller or spray application

Coverage 3-10m² depending on porosity of substrate

Touch dry 15-90 minutes

Water and alkali resistant

Sizes 5 litre, 25 litre

Case Studies



Malaysian Timber Research, Johor, Malaysia

RSA Adhesive was used to bond the galvanised steel connecting plates into the indigenous hardwood beams. Over 200 plates and shoes were fitted to the Glulam beams. The thixotropic adhesive penetrated deeply into the wood giving a secure and reassuring bond. Rotafix engineers provided onsite consultancy to assist in the manufacturing and assembly stages.



Kiddington Hall, Oxfordshire

Kiddington Hall built in 1673 had significant damage to the main beams as a result of decay and infestation. TG6 was used in conjunction with stainless steel rebar to reinstate the integrity and reinforce the beams. A low disturbance method was required to protect the decorative ceiling suspended below the beams.



The Lancasters, Hyde Park, London

The refurbishment of The Lancasters development in Hyde Park, London, required a high performance water proof coating. Aquachem® was used to tank the ceilings and walls to ensure that the underground car parks were watertight. Aggregates were combined with the Aquachem to form a skid resistant coating for the walkways and ramps.



Leeds Castle, Kent

To give a high strength, low weight, fast curing solution, CB10T was used to bond carbon fibre plates into the timber beams. CB10T is a fast setting thixotropic structural adhesive. Rotafix patented Timber Resin Splice (TRS) units were used as replacement beam ends.

For information on approved Rotafix contractors please contact:
Rotafix Ltd, Rotafix House, Abercraf, Swansea SA9 1UR

Head Office

Rotafix Ltd
Rotafix House
Abercraf, Swansea
SA9 1UR
United Kingdom
Tel: +44 (0)1639 730481
Fax: +44 (0)1639 730858

London and South East

23 Polehanger Lane
Warners End
Hemel Hempstead
HP1 3PT
Tel: +44 (0) 1442 243169

France

Bois Moreau
16210
Charente
France
Tel: 00 33 545984088

Distributor Stamp

