

# RIW CEMENTSEAL

Cementseal is a two component, polymer modified, cement based, waterproof coating for concrete and masonry.

## BENEFITS

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- | Totally waterproof
- | Resists up to 100m head of positive and negative water pressure
- | Seamless and fully bonded
- | Applied to damp surfaces
- | Abrasion and impact resistant
- | Quick and easy to apply by hand or spray
- | Environmentally friendly
- | Enhanced resistance to carbonation

## APPLICATIONS

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- | Basements & sub-structures
- | Plant room floor coatings
- | Temporary waterproofing

## APPLIED TO

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- | Concrete
- | Masonry
- | Steel

# RIW CEMENTSEAL

## TYPICAL USES

Cementseal is used to prevent water ingress into basements, cellars and other below ground structures. It can also be used for temporary waterproofing in new construction, to protect from water ingress in order to allow finishing trades to access areas underneath in fast track construction.

The product when mixed exhibits a good degree of thixotropy to enable ease of application by brush or spray techniques to give an even finish with no sagging even in vertical situations. It hydrates to form a durable, highly alkaline, tough and durable coating which not only protects the concrete, or other substrates, from water penetration and carbon dioxide diffusion.

## DURABILITY

Subject to normal conditions of use, Cementseal will provide an effective barrier to the transmission of liquid water for the life of the structure.

## SPECIFICATION

J10 – Cementitious mortar tanking/damp proofing in accordance with NBS Clauses.

## INDEPENDENT AUTHORITY

	
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EN 1504-2: Surface Protection Systems – Coating	
Protection against Ingress (PIC) Rigid trafficked system	
Protection Against Ingress (PIC) Rigid trafficked system	
Compressive strength:	Class 1 $\geq 35$ MPa
Permeability to CO <sub>2</sub> : Equivalent to 100mm of concrete	
Permeability to water vapour:	S <sub>D</sub> < 5m Class 1
Capillary Absorption:	Class III < 0.1 kg m <sup>-2</sup> h <sup>-0.5</sup>
Thermal Compatibility	> 2.0 Mpa
Adhesive Bond:	$\geq 2.0$ Mpa
Dangerous Substances:	Complies
Reaction for Fire:	Euroclass A2-s1, d <sub>0</sub>

## PERFORMANCE & COMPOSITION

Density	1900 kg/m <sup>3</sup>
Application thickness:	
Soffits & vertical	2mm; applied in 2 coats
Floors	2mm; applied in 1 coat
Temporary waterproofing	1mm; applied in 1 coat
Compressive strength:	
1 day	3 – 7 N/mm <sup>2</sup>
7 days	20 – 30 N/mm <sup>2</sup>
28 days	40 – 45 N/mm <sup>2</sup>
Waterproofing	Resists 10 bar pressure
Application temperature	5 – 35° C
Working life	30 minutes at 20° C
Overcoating time	30 minutes to 24 hours

The above performance figures are typical values and should not be considered a product specification.

## ANCILLARY PRODUCTS

RIW produce a range of ancillary products for use with Cementseal which include:

**RIW Cementseal Primer** – a ‘primer’ for use on all horizontal and porous surfaces. May also be used as a curing membrane.

**RIW Cementfill FC** – a waterproof fairing coat and repair mortar for filling minor holes, voids and defects.

**RIW Cementfill HB** – a waterproof high build repair mortar for profiling and providing fillets.

**RIW Cementjoint** – a flexible waterproof composite tape, for embedding in Cementseal to reinforce joints, etc.

## CONSTRUCTION

### IMPORTANT NOTES

- Existing substrates and structural elements should be assessed for suitability to withstand any increase in applied loads from water pressure.
- Apply only to clean, sound substrates which should be saturated but surface-dry and free of back water pressure.
- Care should be taken when curing in hot, sunny or windy conditions.
- Cementseal is not a decorative finish and may temporarily discolour until uniformly weathered.

## GENERAL

All construction should conform to the Building Regulations, Codes of Practices and British Standards in current use at the time the building is being constructed. In particular it is recommended that reference is made to BS 8102: 2009.

## PREPARATION

**All surfaces:** The areas to be treated must be free from all loose and unsound material ie: dust, oil, grease, corrosion by-products and organic growth. Roughen smooth surfaces. The prepared substrate should be thoroughly soaked with clean water, until uniformly saturated, without standing water.

Internal corners should be eased with Cementfill HB as a continuous 'fillet' (minimum 25 x 25mm), prior to application of Cementseal.

Any sharp edges, ledges, holes, etc. are to be smoothed or filled as required, using Cementfill FC or Cementfill HB to suit.

Cementseal Primer should be first used on all horizontal and porous surfaces, as necessary; see separate data sheet.

**Existing Surfaces:** All existing finishes must be completely removed back to the structure.

The entire substrate should then be pressure washed. This method is also the best way to saturate the surfaces, and remove soil, dust and any other loose debris from the existing wall.

Mortar joints should be checked to ensure they provide a sound a substrate, onto which the main cement-based coating can be applied.

Defective mortar joints should be raked out, and repointed using Cementfill HB.

Damaged brickwork, etc. should be repaired as necessary; the area may be 'dubbed out' if required, or deep repairs, made using Cementfill HB. If necessary, a smoothing coat of Cementfill FC may be applied.

**Masonry surfaces:** Should be sound with joints flush pointed or 'bagged out', with Cementfill FC before the Cementseal is applied.

**Concrete surfaces:** The strength of the concrete sub base must be a minimum of 20N/mm<sup>2</sup>.

All surface laitance should be removed, preferably using wet grit, power washing techniques or other equivalent approved methods.

Damaged areas should be repaired as necessary, using Cementfill HB if appropriate.

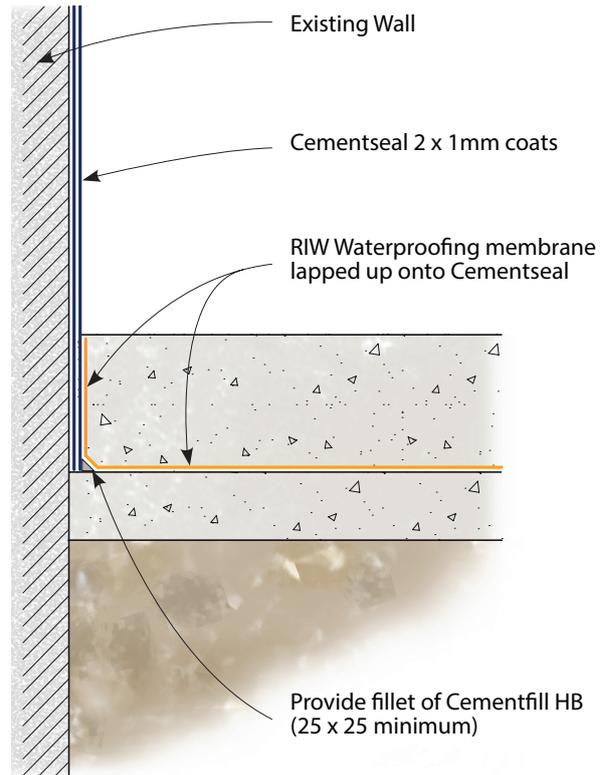
## MIXING

Shake bottle thoroughly, and pour into the tub supplied. Slowly add the powder, and mix for a minimum of 5 minutes until homogeneous.

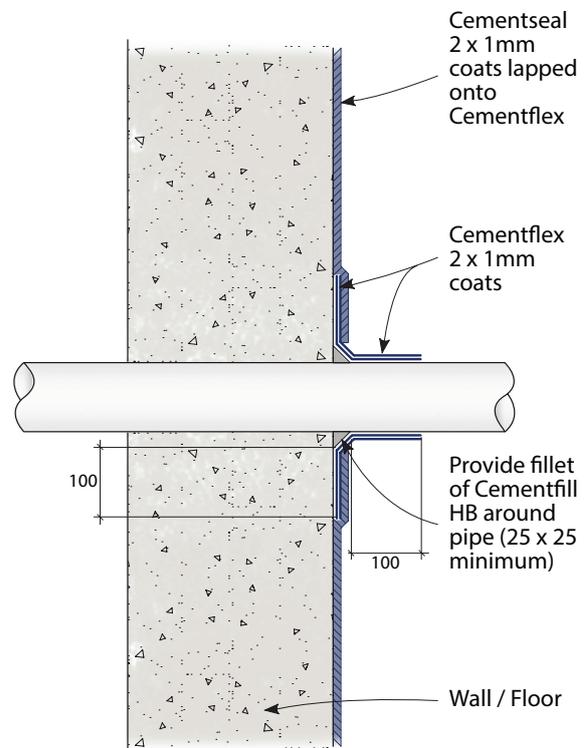
The modules must be mechanically mixed using a slow speed drill and paddle, specially designed to entrap as little air as possible. A normal concrete mixer is not suitable.

The product is supplied in pre-measured packs and full units should be mixed wherever possible.

However, for smaller areas of application, part packs can be mixed using an initial ratio of approximately 3.5 volumes of powder to 1 volume of liquid, which should be adjusted to give the desired consistency.



## Internal Tanking



## Pipe Entry Detail

## APPLICATION

The above preparation/remedial works should be left until 'stable' before application of the Cementseal ie: a minimum of one (1) hour, generally 2 to 3 hours.

Cementjoint should also be used when necessary, to reinforce joints subject to movement; see separate data sheet.

The mixed slurry can be applied by brush, squeegee or spray to a pre-soaked surface. Take care to ensure that air is not entrapped into the surface.

Apply as a single 1 or 2mm layer to horizontal surfaces, spreading with a skid leveller or notched trowel, and immediately use a spiked roller to release entrapped air.

For other surfaces, the product should be applied in two 1mm coats. Curing must commence within 10 to 15 minutes of the completed application.

The second coat should be applied when the first is stable, but not fully set. ie: after waiting approximately 30 to 60 minutes, dependent upon temperature.

## CLEANING

All tools should be cleaned with water immediately after use.

## CURING

Normal concreting procedures should be strictly adhered to. It is important the surface of the coating is protected from strong sunlight and drying winds with Cementseal Primer, polythene sheeting, damp hessian or similar.

## SAFETY

Full health and safety instructions are contained on the product material safety data sheets and these must be referred to before use.

## SUPPLY

### AVAILABILITY

All RIW products can be obtained through Builders Merchants or approved stockists. A list of approved stockists is available from RIW's offices.

### PACKAGING

Pack Size	15 kg (two part) in plastic tub
Yield	One pack yields 7.9 litres of slurry; sufficient to treat 4 m <sup>2</sup> at 2mm thickness

## STORAGE

Store the containers in dry, frost free, conditions.

Shelf life in unopened containers at 20°C is 12 months.

## TECHNICAL SERVICES

The Technical Department is available to advise on individual projects and to prepare and assist in the preparation of specifications and drawings. A list of experienced applicators of our materials is available from RIW's offices.

The information in this literature was correct at the time of going to press. However, we are committed to continually improving our products and reserve the right to change product specifications.

For the latest information, please consult RIW. Conditions of use are beyond our control, therefore we cannot warrant the results to be obtained.

## RIW Limited

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**waterproof** RIW