

Cementflex

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

BENEFITS

- Totally waterproof
- Resists up to 100m head of positive and negative water pressure
- Tough & flexible to accommodate differential movement
- Seamless and fully bonded
- Applied to damp surfaces
- Abrasion and impact resistant
- Quick and easy to apply by hand or spray
- Environmentally friendly

APPLICATIONS

- Waterproofing of;
- Basements & sub-structures
 - Podium decks
 - Balconies & Terraces
 - Inverted roofs
 - Temporary waterproofing

APPLIED TO

- Concrete
- Masonry
- Steel



DESCRIPTION

RIW Cementflex is a two component, cement based, polymer rich coating with excellent adhesion to prepared concrete and masonry substrates. When mixed, it 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, permanently elastomeric coating which not only protects the concrete, or other substrates, from water penetration and carbon dioxide diffusion, but also accommodates movement in cracks. The elastomeric coating maintains its flexibility under permanent immersion and when exposed externally.

TYPICAL USES

RIW Cementflex is ideally suited for waterproofing and protecting concrete and masonry structures which exhibit cracking, and where further movement is expected. Typical applications include preventing water ingress into basements, cellars and other below ground structures. The product can also be used for sealing water tanks, waterproofing of exposed or buried roofs, and as a crack isolation membrane on concrete floors or screeds.

DURABILITY


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

SPECIFICATION

J10 – Cementitious mortar tanking / damp proofing or C42 – Repairing / Renovating / Conserving concrete.

Please consult RIW Limited for further information.

INDEPENDENT AUTHORITY

 RIW424	
RIW Limited Arc House, Terrace Road South, Binfield, Bracknell, Berkshire, RG42 4PZ, England 11 0086-CPD-530942	
EN1504-2: Surface Protection Systems - Coating Protection Against Ingress (PIC) Rigid trafficked system	
Adhesive Bond:	≥ 0.8 MPa
Water Vapour Permeability:	Class I <5m
Permeability to CO ₂ :	Equivalent to 135mm of concrete
Thermal Compatibility EN13687-1:	> 0.8 MPa
Capillary Absorption:	Class III <0.1 kg.m ⁻² .h ^{-0.5}
Dangerous Substances:	Complies with 5.4
Reaction to Fire:	Euroclass B-s1, d0
Cracking Bridging EN1062-7:	Class A5 > 2500µm

PERFORMANCE & COMPOSITION

TECHNICAL DATA	
Basis	Cement based, modified styrene acrylic copolymer
Mixed Colour	Concrete Grey
Mixed Density	1600 kg / m ³
Application temperature	5 – 35° C
Working life	45 minutes at 20° C
Drying Time	4 – 6 hours depending upon temperature.
Number of coats required	Two at 1mm thickness for overhead and vertical work. One at 2mm thickness for floors.

MECHANICAL CHARACTERISTICS (TYPICAL)	
Compressive Strength : BS 4551 Tested at 20°C	
28 days	8 – 10 N / mm ²
Flexural Strength : BS 4551 Tested at 20°C	
28 days	3.5 – 4.0 N / mm ²
Tensile Strength : 2mm film cured for 28 days	
Ambient	0.5 N / mm ²
Immersed	0.4 N / mm ²
Elongation : 2mm film cured for 28 days	
Ambient	120 – 130 %
Immersed	70 – 80 %
Water Permeability Coefficient : DIN 1048 Part 1	
5.37 x 10 ⁻¹⁶ m / sec.	
2mm of RIW Cementflex = 2270mm of concrete	
Oxygen Diffusion Coefficient :	
BS EN 1062-6 Taywood Test	
DO ₂ = 1.706 x 10 ⁻⁵ cm ² .s ⁻¹	

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

CONSTRUCTION

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 : 1990.

PREPARATION

The areas to be treated must be free from all unsound material, i.e. dust, oil, grease, corrosion by-products and organic growth. Smooth surfaces should be cleaned to remove release agents, curing compounds and surface laitance ; preferably using wet grit or water blasting techniques or equivalent approved methods. The concrete sub-base should be a minimum of 20 N / mm². The prepared substrate should be thoroughly soaked (preferably 24 hours before) with clean water until uniformly saturated without any standing water.

PRIMING

Floors are to be primed with **RIW Cementseal Primer**, see separate data sheet.

MIXING

Shake Part A 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. Bottles of liquid and bags of powder are not to be split.

PLACING

RIW Cementflex should generally be applied using spray techniques. Brush or trowel applications may be employed although care must be taken to ensure that air is not entrapped into the surface. Apply the first coat, approximately 1mm thick, onto the prepared substrate. To ensure total protection, a second coat should be applied in the same way, after waiting approximately 4-6 hours - depending on temperature (when the first coat is stable but not fully set). On horizontal deck applications, apply as a single 2mm layer, spreading with a skid leveller or notched trowel and immediately use a spiked roller to release entrapped air.

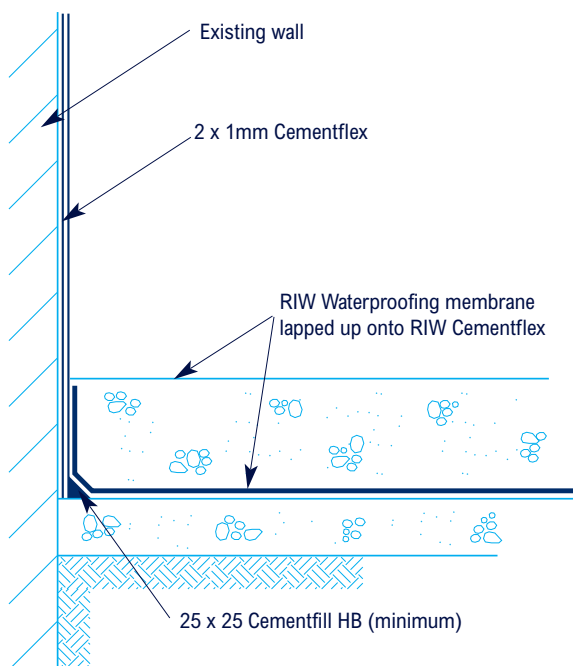
CLEANING

All tools should be cleaned with water immediately after use.

CURING

Normal procedures relating to curing of cementitious products should be strictly adhered to. It is important that the surface of the coating is protected from strong sunlight and drying winds with **RIW Cementseal Primer** polythene sheeting, damp hessian or similar. Curing must commence within 10 - 15 minutes of the completed application of the coating.

DETAIL 1



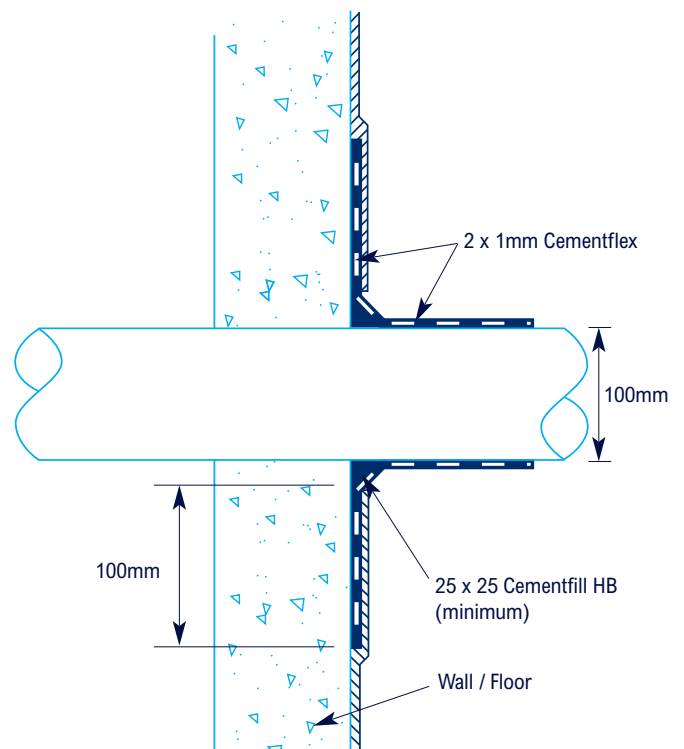
IMPORTANT NOTES

1. Apply only to clean, sound substrates which should be saturated but surface-dry and free of water back pressure.
2. Care should be taken when curing in hot, sunny or windy conditions.
3. **RIW Cementflex** is not a decorative finish and may temporarily discolour until uniformly weathered.

ADVANTAGES

- Dense matrix offers low permeability to water, even at 10 bar pressure (100m head of water).
- Brush, trowel or spray applied, normally in two coats. Flooring applications are a one coat operation.
- Tough, flexible coating which maintains its elastomeric properties even under immersed conditions to accommodate movement in cracks.
- Good abrasion and very high resistance to freeze / thaw cycles and de-icing salts.
- Excellent adhesion to steel and sound prepared concrete and masonry substrates.
- Non-hazardous and ideally suited for application in confined spaces.
- Can be applied to damp substrates.
- Water based product free from hazardous solvents making it suitable for use in confined spaces.
- Non-toxic when cured.

DETAIL 2 PIPE ENTRY DETAIL



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 Ltd's offices.

PACKAGING

Pack size	15 kg in plastic tub ie : 2No. x 7.5 kg (two part) mixes.
Yield	9.4 litres / 15 kg pack
Coverage	1.6 kg / mm / m ² ; On repaired and normal concrete surfaces, 15 kg packs will cover 4.7 m ² at 2mm thickness.

SHELF LIFE

12 months in dry, frost free conditions with unopened containers at 20° C

TECHNICAL SERVICES

The RIW Technical Department is available to advise on individual projects and to prepare and assist in the preparation and specifications and drawings. A list of experienced applicators of RIW materials is available from RIW Ltd'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 Limited. Conditions of use are beyond our control, therefore we can not warrant the results to be obtained.



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