

Heritage and Innovation

For over 80 years RIW have provided the building industry with high performance structural waterproofing systems that can be found on many of the most prestigious buildings throughout the UK.



Although launched as a limited company in 1921 the “RIW” brand and heritage can be traced right back to 1848. Ever since then RIW have become synonymous with high performance waterproofing products that are relied on throughout the building construction industry.

At RIW, we have always taken pride in our professional approach to providing specific watertight solutions for most of the waterproofing problems associated with today’s structures and our expertise is passed on to our customer via our invaluable technical advisory service.

Over the last 80 years the RIW brand has become the generic term throughout the industry for traditional liquid applied waterproofing solutions, however, the RIW product range has not been allowed to stand still. Now incorporating a wide

variety of diverse waterproof membranes suitable for use above, below and at ground level, the range provides complete waterproofing assurance, a single point of responsibility and peace of mind to today’s generation of architects and engineers dealing with the complexities of contemporary building products, as it has done for generations before. RIW understands the need to stay in touch with modern day construction methods. Innovative “fast track” waterproofing solutions have been added to the range to compliment traditional systems such as RIW LAC, renowned throughout the building industry and commonly referred to as “two coats of RIW”.

The brand consistently guarantees proven performance and a culture of continuous innovation.



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Specification Guide



Step 1 Identify the different waterproofing systems that can be used in your application

External Tanking

External tanking is the application of a waterproof membrane to the outside of a basement or sub-structure in accordance with BS8102:1990 [Type A form of construction]. Generally, waterproof membranes are installed horizontally onto a concrete blinding layer and vertically onto reinforced concrete or masonry sub-structures.

When selecting a suitable external tanking system consideration should be given to the form of construction, ground water level, ground drainage, soil type and ground contamination. Boundary line construction applications, including secant piling, contiguous piling and sheet piling, create challenging substrates due to factors such as the need for excessive surface preparation, so selection of the correct waterproofing system is crucial. Externally applied membranes should be protected against damage during backfilling. Sub-soil drainage systems should be incorporated in to the design where required.

In areas where the water table is classed as "High", please consult the RIW Technical Department.

Suitable products

FLEXISEAL	SHEETSEAL GR
LAC	SHEETSEAL 226
STRUCTURESEAL	

Internal Tanking

Internal Tanking is the application of a waterproof membrane to the inside of a basement or sub-structure in accordance with BS8102:1990 [Type A form of construction].

When selecting a suitable internal tanking system consideration should be given to the form of construction, ground water level, ground drainage, soil type and ground contamination. When tanking internally with applied membranes hydrostatic water pressure acting upon the membrane must be resisted by loading the horizontal membrane with a 65mm [min] screed and the vertical membrane with an internal skin of masonry, 20-40mm from the membrane, incorporating mortar packing directly against the membrane. External sub-soil drainage should always be incorporated into the design where required.

In areas where the water table is classed as "High", please consult the RIW Technical Department.

Suitable products

FLEXISEAL	SHEETSEAL GR
LAC	CEMENTSEAL
TOUGHSEAL	CEMENTFLEX
SHEETSEAL 226	

DPM

A DPM is a continuous and impervious membrane applied above or below ground floor slabs to prevent water ingress into a structure. The membrane should be linked to the DPC. A DPM can be applied to either to the top of the slab or beneath on to a concrete blinding. Moisture sensitive internal finishes are protected from any residual moisture in the concrete when the membrane is applied to the top of the slab.

Consideration should be given to selecting highly flexible or preformed membranes for modular or suspended floor constructions such as block and beam. Liquid applied coatings based on epoxy resins are suitable as a surface membrane beneath levelling compounds or floor finishes.

Suitable products

FLEXISEAL	SHEETSEAL 226
LAC	SHEETSEAL GR
TOUGHSEAL	CEMENTSEAL

Raised Access Floor

A tough waterproof membrane should be applied directly under a raised access floor to act as a water containment system preventing the passage of water through to other areas. Modern hi-tech buildings can contain a great deal of sensitive electrical equipment which needs to be protected from water intentionally introduced into the building, such as through automatic sprinkler systems and via core areas incorporating toilets and showers.

Consideration should be given to its compatibilities with epoxy adhesives used to fix the pedestal to the sub floor, eliminating the necessity to puncture the containment membrane. The membrane will also act as a good quality dust sealer and provide an impact resistant floor finish with a Class 1 spread of flame rating under a raised access floor.

Suitable products

TOUGHSEAL

Plant Rooms

Plant room floors are generally bunded and/or waterproofed to contain any leaks or spillages from faulty tanks, plant or pipe work. The consequences of leaks into critical areas adjacent to, or below can be costly and disruptive. Plant rooms in basement areas also need a containment system to prevent contamination of the ground and provide damp proofing to separate electrical plant from other areas.

Consideration should be given to the waterproofing system's resistance to chemicals and abrasion, allowing it to be applied as an exposed system to concrete and masonry bunds. A slip retardant finish with a Class 1 spread of flame rating is also achievable.

Suitable products

TOUGHSEAL	CEMENTSEAL
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Podium Decks

Many contemporary buildings today incorporate landscaped basement roofs, commonly known as plazas or podiums. The basement can vary from habitable space to car parking, so it is vital the correct waterproofing system is selected when waterproofing the Podium Deck.

Consideration should be given to deck movement, drainage, waterproofing continuity at expansion joints, drainage outlets, landscaping and most importantly what is below the deck. The same influences should be considered when waterproofing other elevated concrete decks such as balconies and terraced areas. A drainage board laid over the membrane will enhance its performance by channelling water to designated drainage points, whilst also protecting the membrane. Hand applied systems that can also be sprayed generally offer the best solution.

Suitable products

FLEXISEAL	CEMENTSEAL
TOUGHSEAL	CEMENTFLEX

Superstructure

RIW liquid membranes can be applied onto superstructures as an effective vapour barrier prior to the installation of rainscreen and other forms of cladding systems. The membrane is designed to protect superstructure [reinforced concrete, steel or masonry] against attack and prevent moisture ingress from water vapour that may become trapped within the cavity.

If the waterproof membrane is to be left exposed for a period greater than 28 days prior to the installation of the cladding, consideration should be given to the UV stability of the selected membrane.

Suitable products

LAC	HEVISEAL
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Drained Cavity Systems

Drained Cavity Systems within the basement or sub-structure form a continuous pre-formed cavity, which intercepts and drains away incoming water in accordance with BS8102:1990 [Type C construction]. They also provide a vapour barrier to enable this low risk form of construction to be used for the highest grade of basement usage [BS8102, grade 4] without ventilating the cavity. The membrane is usually installed inside the basement structure and on to the structural slab. Facilities for draining ground water ingress must be incorporated into the design.

When selecting a suitable drainage cavity system the external basement structure must provide enough resistance to water ingress to ensure the cavity only accepts a controlled amount of water. Consideration should also be given to the form of construction, ground water levels, external ground drainage and soil type.

Suitable products

CAVITY DRAIN

Retaining Walls

Retaining walls can be external walls forming part of the landscape design or walls that form part of a property. Landscape walls possibly with weep holes incorporated to alleviate hydrostatic pressure are much less critical but often require a membrane to prevent dampness from the ground spoiling the aesthetic nature of the design. Walls that protect habitable areas must be considered as high risk and tanked accordingly. A profiled drainage board will enhance the performance of the membrane.

Suitable products

LAC	SHEETSEAL 226
HEVISEAL	STRUCTURESEAL
FLEXISEAL	DOUBLE DRAIN

Wet areas

Designs incorporating wet rooms require a watertight containment system to be installed behind the ceramic tiles and finishes to prevent water penetration through the tile due to commissioning leaks, substrate movement and grout failure. A flexible system should be considered on modular construction products such as plywood and plasterboard. Systems that incorporate membranes that can be applied quickly and allow immediate tiling help minimise construction delays.

Suitable products

TILES SAFE	TOUGHSEAL
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Lift Pit

Often situated below the floor slab, lift pits can be subject to hydrostatic pressure. They are usually small and externally tanked in difficult, wet and confined working conditions making the installation of a waterproofing system challenging. Consideration should be given to using an easily applied high performance waterproofing system and incorporating a small sump or low point in the base of the pit from which water can be pumped from in the event of extreme weather conditions.

Suitable products

FLEXISEAL	SHEETSEAL 226
LAC	DOUBLE DRAIN
TOUGHSEAL	CEMENTSEAL
STRUCTURESEAL	CEMENTFLEX

Planters

Waterproofing a planter is no less critical than other areas, leaks can be damaging and costly, planters also require a membrane to prevent dampness spoiling the aesthetic nature of the design. If irrigation pipes are required consideration should be given to waterproofing around these. The membrane in a planter should be protected against damage during backfilling and garden maintenance.

Suitable products

FLEXISEAL	SHEETSEAL 226
LAC	CEMENTSEAL
TOUGHSEAL	CEMENTFLEX
HEVISEAL	

Construction Joints

Construction joints within a reinforced concrete structure below ground are perhaps the weakest part of the structure and should be protected from ground water ingress with the installation of a Bentonite Hydrophillic waterstop to form a permanent pressure seal to exclude water ingress through the joint.

Suitable products

WATERSTOP	CEMENTJOINT
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Gas/Radon Resistant

Ground contaminants and gases such as Radon, Methane & Carbon Dioxide must be considered when deciding upon a waterproofing design. Gases can enter the building via cracks and joints that form within the structure so a flexible membrane should be selected that is capable of accommodating movements in the structure without fracturing.

Suitable products

FLEXISEAL	SHEETSEAL GR
LAC	SHEETSEAL 226

DPC/Cavity Tray

Damp proof courses are used to prevent moisture from the ground rising into the internal fabric of the structure. They should be installed 150 mm minimum above external ground level and linked to the DPM protecting the floor slab. Cavity trays are designed to divert water within cavity wall construction through to the outside. It is especially important to ensure cavity trays above basements are carefully installed with fully taped and sealed joints to prevent water bypassing the tanking membrane.

Suitable products

SHEETSEAL 9000

Temporary Waterproofing



















Multi-phased contemporary buildings and existing structures may require temporary protection against water ingress to individual floors or walls as the construction progresses. Consideration should be given to the ease of installation, UV stability, impact resistance and durability of the membrane. Where necessary, suitable drainage discharge points should also be incorporated.

Suitable products

TOUGHSEAL	CEMENTSEAL
HEVISEAL	CEMENTFLEX

Step 2 Select the most appropriate system for the specific needs of your project


LIQUID APPLIED SYSTEMS


FLEXISEAL	Two coat, liquid applied, seamless and fully bonded waterproof coating based on polyurethane resins.	 Chemical Resistance	 Colour Coded	 Flexible	 Radon Resistant	 Sulphate Resistant		
HEVISEAL	Two coat, liquid applied, bitumen solution filled with fibres and minerals to provide a UV resistant waterproof coating	 Radon Resistant	 Sulphate Resistant	 UV Stable				
LAC	Two coat, cold applied bitumen solution that dries to form a seamless and fully bonded waterproof coating	 Plasterbond	 Radon Resistant	 Sulphate Resistant				
TOUGHSEAL	Two coat, liquid applied, seamless, fully bonded and durable waterproof coating based on epoxy resins.	 Chemical Resistance	 Class 1 Fire Rating	 Colour Coded	 Impact Resistant	 Radon Resistant	 Sulphate Resistant	 UV Stable


SHEET APPLIED SYSTEMS


SHEETSEAL 226

A cold applied self adhesive sheet containing an HDPE film coated with rubber bitumen to form a preformed waterproof membrane.

Flexible


Radon Resistant


Self Healing


Factory Controlled Thickness


SHEETSEAL GR


A cold applied self adhesive bitumen membrane incorporating an aluminium foil layer to form a preformed waterproof and gas proof membrane.


CO₂ Barrier

Flexible

CH₄ Resistant


Radon Resistant


Self Healing


Factory Controlled Thickness


TILESAFE

A cold applied self adhesive bitumen membrane incorporating a woven glass fibre mesh to form a waterproof membrane compatible with tile adhesive.


















Flexible

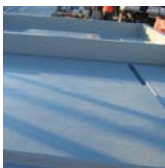
Radon Resistant

Self Healing

Factory Controlled Thickness

SODIUM BENTONITE SYSTEMS

STRUCTURESEAL	Highly effective waterproofing composite of high strength geotextile and high swelling sodium bentonite clay	 Coil or Roll	 Low Temperature	 Self Healing	 Factory Controlled Thickness	 Wet Substrate	
WATERSTOP	A hydrophilic waterstop based on sodium bentonite material, designed to permanently seal insitu concrete construction joints.	 Coil or Roll	 Flexible	 Low Temperature	 Self Healing	 Factory Controlled Thickness	 Wet Substrate
SEALING COMPOUND	A trowel-grade, sodium bentonite / butyl-rubber based sealant for detail work and surface preparation in conjunction with Structureseal.	 Low Temperature	 Self Healing	 Wet Substrate			
GRANULES	Chemically treated sodium bentonite granules, used as a detailing accessory product, with the Structureseal system.	 Low Temperature	 Self Healing	 Wet Substrate			



For technical help contact us on **01344 397777**

For commercial help contact us on **01344 397788**

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CEMENT BASED SYSTEMS

DPC / CAVITY TRAY

SHEETSEAL 9000

A range of high quality Polymeric DPC and cavity tray systems containing polyester fibres to increase tensile strength and elongation at break

Flexible















Low Temperature

Radon Resistant

Factory Controlled Thickness

UV Stable

STRUCTURAL DRAINAGE SYSTEMS

CAVITY DRAIN	<p>A profiled HDPE cavity drain system designed to collect and channel water entering a basement to a suitable point for disposal.</p>							
		CO2 Barrier	Low Temperature	Methane Resistant	Plasterbond	Radon Resistant	Factory Controlled Thickness	Wet Substrate
DOUBLE DRAIN	<p>A profiled HDPE drainage board incorporating a filter fabric designed to protect waterproof membranes and relieve hydrostatic water pressure.</p>							
		Chemical Resistance	Impact Resistant	Low Temperature	Factory Controlled Thickness	UV Stable	Wet Substrate	Wet Substrate

Step 3 Review the product specific data sheet for technical details and guidance on how the system should be incorporated into your design

“Step by step instructions on how to specify a suitable waterproofing system for a range of standard structures can be found in the **Design Guidance** section at the back of the binder”.