

Benefits

Water and water vapour barrier
Radon barrier
Elastic and flexible
Easily applied and adapted to difficult details
Sulphate resistant

Applications

Waterproofing and vapour proofing of:
Ground floors
Superstructures
Basement and Sub-structures
Retaining walls

Applied to

Concrete
Masonry
Steel
Timber

CI/SfB

Vs1



April 2003

LIQUID ASPHALTIC COMPOSITION (LAC)

RIW Liquid Asphaltic Composition is a two coat, cold applied damp proof membrane, which dries to a uniform gloss black finish. The coating is a solution of natural and petroleum bitumens in white spirit.

RIW

TYPICAL USES

RIW Liquid Asphaltic Composition is typically used as a damp proof membrane to ground floors, as a vapour barrier behind cladding and for tanking of basements. It is also suitable for waterproofing foundation walls, ducts, lintels, columns, beams and similar structures at, above and below ground level.

When designing Type A structures (as classified in BS 8102 : 1990), the product applied correctly is capable of providing the levels of protection required for Grades 1, 2, 3 & 4 basements.

RIW Liquid Asphaltic Composition may also be applied to the internal face of external walls above ground level to prevent the penetration of moisture. The membrane can then be plastered when dry.

RIW Liquid Asphaltic Composition may also be used to provide a barrier to Radon Gas.

RIW Liquid Asphaltic Composition should not be used in contact with potable water systems.

DURABILITY

Subject to normal conditions of use RIW Liquid Asphaltic Composition will provide an effective barrier to the transmission of liquid water and water vapour for the life of the structure.

RIW Liquid Asphaltic Composition retains its elasticity and will not crack or peel provided it is protected from mechanical damage and exposure to U.V. light.

SPECIFICATION

J30 - Liquid Applied Tanking / Damp Proofing in accordance with NBS Clauses.

Please consult RIW Ltd for further information.

INDEPENDENT AUTHORITY

RIW Liquid Asphaltic Composition has been awarded British Board of Agrément Certificate No. 89 / 2278, covering its use for the tanking of basements and as a damp proof membrane for solid floors.

Tests carried out by the National Radiological Protection Board show that RIW Liquid Asphaltic Composition will provide a barrier to the passage of Radon by diffusion.

A copy of their report is available upon request.

PERFORMANCE & COMPOSITION

RIW LIQUID ASPHALTIC COMPOSITION	
Form	Bitumen Solution
Colour	Black
Specific gravity	0.95g / ml
Solids Content	71% (w / w)
Flash Point	38°C
Water vapour resistance	590MNs / g
Water vapour permeability	0.43g / m ² per 24 hours
Diffusion coefficient for radon	1.7 x 10 ⁻¹³ m ² s ⁻¹
Diffusion length for radon	0.28mm
Coverage for two coats *	1m ² / litre (typical) 1.25m ² / litre (steelwork)
Number of coats	Two (One coat only onto render prior to plastering)
DFT of coating	0.75mm for two coats
Curing time	Touch dry : 24 hours
Overcoating time	Minimum : when touch dry
Elongation	260%
Application temperature limits	5-35°C
Preparation of liquid	None
Sulphate resistance	50,000ppm
U.V. resistance	Low, protect within 28 days
Shelf life (Temperate climate)	12 months

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

* Figures quoted are theoretical coverage rates. Actual coverage may vary depending on nature of substrate.

ANCILLARY PRODUCTS

RIW produce a range of ancillary products for use with RIW Liquid Asphaltic Composition which include:-

RIW Sheetseal 226 - a flexible sheet membrane, used over the Liquid Asphaltic Composition, for reinforcing areas subject to movement.

RIW Double Drain - a drainage board which protects the membrane during backfilling operations, and also promotes drainage of water away from the structure.

RIW Protection Board - a 3mm bitumen impregnated board to prevent damage to the waterproof membrane during backfilling operations.

RIW Adhesive Tape - a 150mm wide double sided tape for temporarily adhering RIW Protection Board or Double Drain to the RIW membrane.

RIW Sheetseal 9000 DPC - a range of high performance polymeric dpc's, and pre-formed cavity trays, compatible for use with all RIW Limited membranes.

CONSTRUCTION

GENERAL

All construction should conform with the Building Regulations, Codes of Practice 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

All Surfaces : Should be smooth, clean, dry (to a depth of 1 - 2mm), sound and free from frost, oil, grease, condensation and other contamination. Any voids or hollows must be made good to a flush finish, with a suitable filler. Any sharp edges or high points should be eliminated. Powdery or flaking surfaces should be removed by suitable means.

Internal corners should be eased with a sand / cement fillet approximately 20mm high to assist application, similarly, external corners should be chamfered or rounded where required.

Concrete surfaces : Horizontal surfaces should preferably be smooth, however lightly tamped (3 - 4mm peak to trough profile), brushed or floated surfaces may also be acceptable.

Masonry : Should be sound with joints flush pointed or "bagged out" before the membrane is applied. Open textured surfaces should be sealed with a sand / cement slurry or render to provide a suitable surface. If existing surfaces are very rough they may require rendering.

Metal surfaces : Should be wire brushed or sand blasted and pre-treated with a steel primer, prior to the application of the membrane, in two coats, at the rate of 2.5m² / litre per coat. Corroded metal should also be treated with an anti-corrosive primer. RIW Liquid Asphaltic Composition is compatible with all commonly encountered steel primers including alkyd, chlorinated rubber and epoxy based paints.

APPLICATION

General : Application of RIW Liquid Asphaltic Composition should not be attempted in temperatures below 5°C. RIW Liquid Asphaltic Composition should be applied as supplied, however under certain circumstances, such as cold weather conditions, it may be necessary to add up to 10% white spirit to ease application. The RIW Liquid Asphaltic Composition should be applied in two coats at a minimum application rate of 1.7m² / litre for the first coat and 2.5m² / litre for the second coat, unless noted otherwise.

Under no circumstances must the liquid be heated or sanded. The coating is not designed for external exposed use, and must be protected from the effects of U.V. light within 28 days of application.

RIW Heviseal may be used as an alternative to RIW Liquid Asphaltic Composition where exposure will exceed 28 days.

Manual : RIW Liquid Asphaltic Composition can be applied using a stiff brush or lambswool roller. The material should be transferred into a suitable container and applied to the substrate by dipping an ordinary

coco-fibre brush into the material and brushing vigorously in all directions to ensure uniform coverage. Do not pour the material onto the substrate or allow it to pool in serrations or depressions. Good ventilation is necessary to obtain a proper cure. At 20°C RIW Liquid Asphaltic Composition will require 24 hours minimum before recoating.

Spray: For further information and details of Specialist Applicators, please consult the RIW Technical Department.

SPECIFIC USES

Tanking : RIW Liquid Asphaltic Composition should always be fully supported, to resist hydrostatic pressure, when used for tanking.

External tanking : Should be carried out as illustrated in Detail 2 of this literature. The horizontal membrane should be laid on a concrete blinding to project at least 200mm beyond the outer face of the structure. The base structural slabs and the walls should be formed, incorporating a fillet at the external base of the wall, and the vertical membrane should then be applied. The internal angle at the base of the wall, and other areas subject to movement, must be reinforced with a 300mm strip of RIW Sheetseal 226. The membrane should then be protected from backfilling using RIW Double Drain or RIW Protection Board.

Internal tanking : Should be carried out as illustrated in Detail 3 of this literature. All internal angles, and other areas subject to movement, must be reinforced with RIW Sheetseal 226 as required. A loading coat of brick, block or concrete should be constructed immediately after the membrane has cured. If brick or block is used, a 20mm minimum cavity should be left between the membrane and the loading skin. This cavity must be filled with a sand / cement mortar fill as work proceeds.

Floating floor construction : RIW Liquid Asphaltic Composition can be used under a floating floor system at ground level. When used under insulation the following guidelines should be followed :

- a) The product must be allowed to dry throughout its thickness before being covered.
- b) The insulation boards must be laid butt jointed, with corners and arrises kept intact to ensure overall loading of the membrane.
- c) The floor finish must not displace the insulation boards during laying.

Radon Barrier : Refer to BRE Report 211 - Radon : Guidance on protective measures for new dwellings.

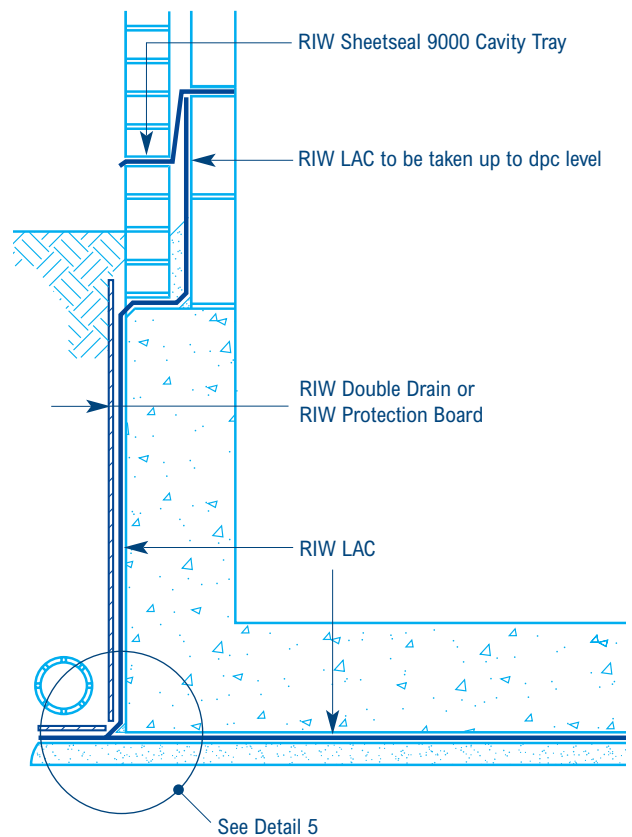
RIW Liquid Asphaltic Composition, has been successfully tested by the National Radiological Protection Board, as an effective barrier against radon. This gives the specifier the opportunity of using a traditional proven material as both a radon barrier and in its normal use, as a water and water vapour barrier. The principal design objective is to construct an airtight and therefore radon proof barrier across the whole site of the building. This can be achieved without the need for skilled labour, or site welded lap joints, when using RIW Liquid Asphaltic Composition.

Vapour barrier behind plastering : RIW Liquid Asphaltic Composition is suitable for use under the following plasters, Carlite Bonding or Thistle Universal Onecoat, and only these products can be recommended. Under no circumstances should cement or lime based finishes be applied to the vertical membrane. RIW Liquid Asphaltic Composition should be applied to a correctly prepared surface, including the removal of efflorescence, old plasters, lime washes etc. The second coat, where required should not be applied until the first coat is dry throughout its thickness, and neither coat should be applied so heavily as to form curtains and sags down the face of the wall.

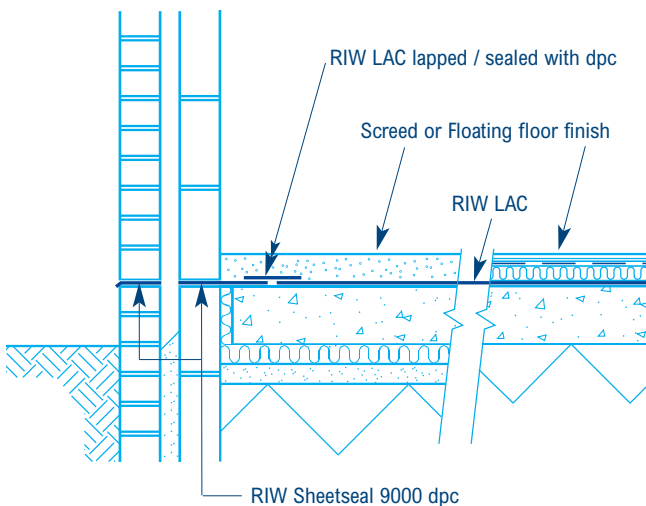
If the RIW Liquid Asphaltic Composition is to be applied to dense concrete, sand / cement render or (semi-) engineering brickwork, only one coat of the membrane is required, at a rate of 1.7m² / litre. The membrane should never be sanded, as the recommended plasters will bond directly to the membrane.

Plastering should never be carried out until the full treatment (one or two coats) is totally dry throughout its thickness. The membrane must be reactivated by wiping a rag moistened in white spirit prior to over-plastering if the membrane has been exposed for 21 days (allow to dry for 4 hours). Points for fixings should be indicated and pockets cut out which should then be filled with mortar after lining with RIW Liquid Asphaltic Composition. Lightweight fixings may be adhered directly to the plaster finish using an appropriate adhesive.

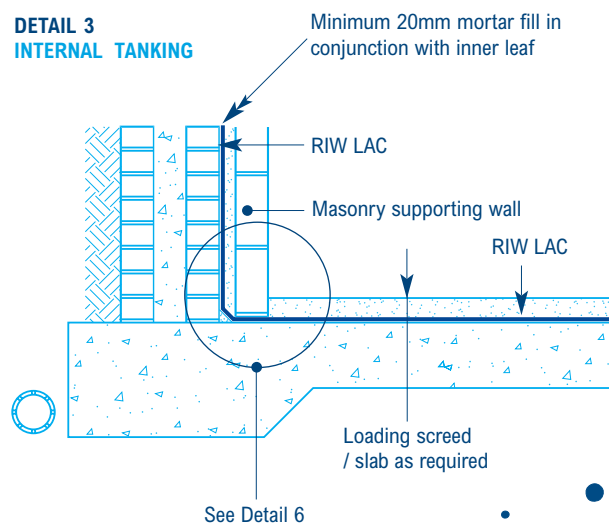
**DETAIL 2
EXTERNAL TANKING TO STRUCTURAL CONCRETE**



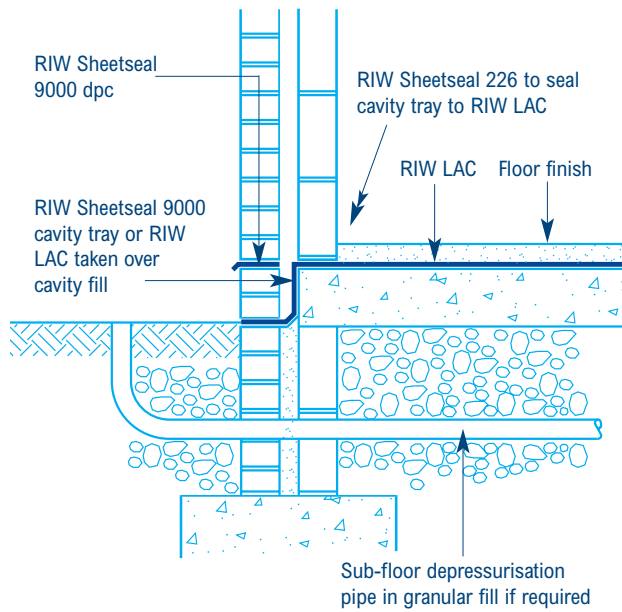
**DETAIL 1
DPM TO GROUND FLOOR SLAB / WALL**



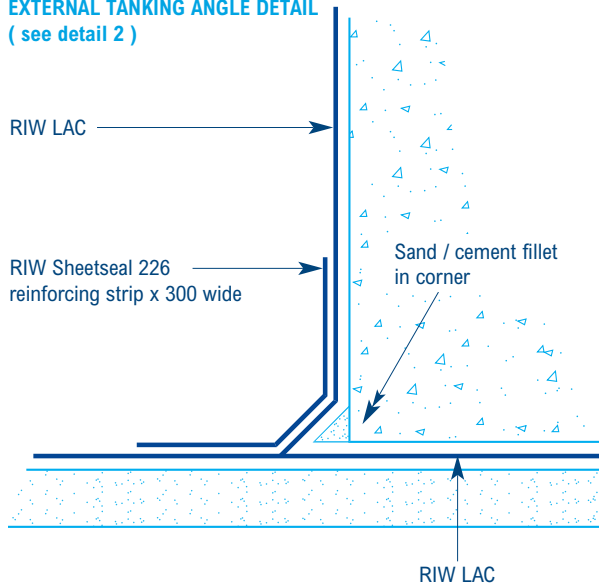
**DETAIL 3
INTERNAL TANKING**



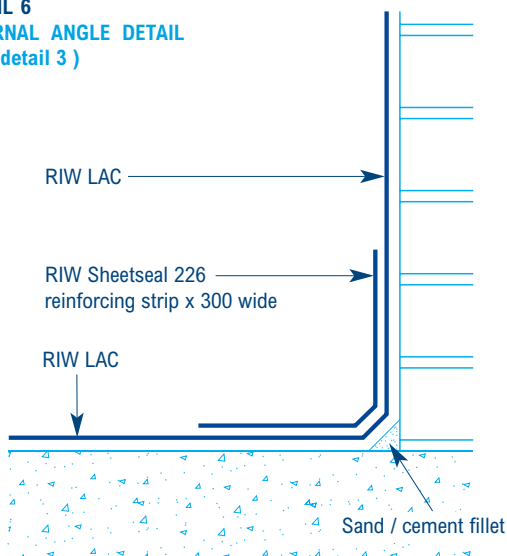
DETAIL 4
DPM TO GROUND FLOOR – RADON BARRIER



DETAIL 5
EXTERNAL TANKING ANGLE DETAIL
 (see detail 2)



DETAIL 6
INTERNAL ANGLE DETAIL
 (see detail 3)



SAFETY

AVAILABILITY

RIW Liquid Asphaltic Composition (LAC) is flammable and should be used in well-ventilated areas away from sources of ignition. The product can affect sensitive skins. Gloves or barrier cream should always be used by operatives and hands thoroughly washed at the end of each working period. Do not allow the product to enter watercourses. 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

RIW Liquid Asphaltic Composition : 5, 25 and 205 litre containers

STORAGE

There are no special requirements, however prolonged storage (in excess of 12 months) may result in some loss of solvents, causing an increase in viscosity. The material may be stored in severe winter environments without any detrimental effect.

TECHNICAL SERVICES

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



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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.