

# ISO FLEX LIQUID RUBBER WATERPROOFING SYSTEM

The Isoflex Liquid Rubber Waterproofing System is based on a moisture curing urethane elastomer. It comprises of three basic products: Special Primer; Liquid Rubber; Clean-Up Fluid. The system is technically far in advance of traditional bitumen based products and offers unrivalled long term performance.



Bitumens, tars and asphalts have been traditionally used on account of their hydrophobic (water repellent) characteristics and low cost. Their disadvantage is their comparatively short life, they become brittle through exposure and eventually crack with thermal movement. Isoflex is distinguished in formulation by its unusually high solids content, high tensile strength, durability and storage life stability.

## COMPOSITION

Isoflex Special Primer  
Single pack high grade urethane polymer resin.

Isoflex Liquid Rubber  
Single pack urethane elastomer membrane in liquid form.

Isoflex Clean-Up Fluid  
Aromatic hydrocarbon fluid.

## PROPERTIES

Isoflex Special Primer  
Appearance - Slightly opaque, yellow brown coloured liquid.  
Odour - Solvent type.  
VOC Content - Very High.

Advantages - High solids and good flexibility; able to form robust barrier which does not dry, but cures to a "tacky" film in order to permit molecular cross-linking with Liquid Rubber.

Isoflex Liquid Rubber  
Appearance - Black, viscous liquid.  
Odour - Solvent type.  
VOC Content - High.

Advantages - Isoflex Liquid Rubber does not embrittle with either age or exposure to the ultraviolet rays in sunlight. Its elasticity will continue to take up high degrees of substrate and thermal movement. Cracking and crazing are eliminated.

Isoflex Liquid Rubber is exceptionally resistant to extremes of temperature and atmospheric pollution.

Isoflex Liquid Rubber's elasticity, durability and ability to adhere to conventionally treated surfaces enables many flat roofs, with a stable substrate, to be refurbished without the need to strip existing surfaces.

Isoflex Clean-Up Fluid  
Appearance - Clear, colourless liquid.  
Odour - Solvent type.  
VOC Content - Very High.

## FIELDS OF APPLICATION

The Isoflex Liquid Rubber Waterproofing System is designed to enable the membrane to adhere to practically any type of material providing it is correctly prepared. This includes roofing felt, asphalt, slates, tiles, asbestos, concrete, brick, wood, glass, ferrous metals, lead and copper. It can also be used directly onto sprayed in-place polyurethane (PU) foam. Designed principally for roof application the Isoflex System can be used on all forms of flat roofs, both for complete recovery as well as patch material. It can also be used for dormer roofs, porches, corrugated roofs, flashings, roof valleys, slate roofs and even glasshouses.

## Other Applications

### Ponds and Water Systems

Isoflex Liquid Rubber is not recommended for use in garden ponds, swimming pools, water tanks and domestic water systems.

## APPLICATION PROCEDURE

### General Substrate Preparation

#### Cracks & Depressions

Cracks or deep depressions should be primed with Isoflex Special Primer prior to application of two thick coats of Liquid Rubber. Where water is likely to pond, three thick coats should be applied. Do not apply in coats of more than 1 mm thick but any number of coats can be applied at 24 hour intervals.

#### Expansion Joints

Clean surrounding surfaces. Where joint sealant does not fill joint, brush in Isoflex Liquid Rubber until flush with surface. Prime joint to a minimum width of 30 cm. Apply a coat of Liquid Rubber and whilst wet embed 30 cm wide strips of reinforcing, woven fabric scrim material, overlapping where necessary, avoid creases and bubbles. Immediately overcoat extending at least 15 cm either side. Do not stretch the fabric. Bolt heads etc. should be given two coats before proceeding with general application.

#### Abutments, Flashing, Valleys, Vent Bases, Upstands etc.

Isoflex Liquid Rubber is self-flashing and can be used on upstands. In such cases the angle between the horizontal and vertical surface should be covered with a 30 cm wide scrim bandage. This should be embedded into the first Isoflex coat immediately after application, thoroughly rolled to prevent creases and bubbles. Continue up vertical surfaces to a minimum distance of 15 cm. Apply two coats of Isoflex Liquid Rubber.

### Special Substrate Preparation

#### Bituminous Surfaces

Remove all loose chippings, dust, fungus, etc. Note that where chippings remain embedded, the surface area is substantially increased and will require a correspondingly greater volume of both Isoflex Special Primer and Liquid Rubber in order to obtain the 1 mm membrane thickness. At least three coats are recommended in such cases. Cut open blisters, paint underside with Liquid Rubber and secure with felt tacks, brush out exuded Isoflex. Allow to dry thoroughly, including the evaporation of moisture from within the layers of felt. Apply Isoflex Special Primer to achieve a uniform coating then apply Isoflex Liquid Rubber, as directed above, within 48 hours.

#### Cementitious and Porous Surfaces

Allow at least 28 days to provide drying time for new concrete. Clean off all laitance, loose and foreign material. All friable or dusting surfaces should be cleaned back to a firm base. Apply Isoflex Special Primer as above. On very absorbent surfaces a two coat application of Isoflex Special Primer is recommended. For initial priming coat only Isoflex Special Primer may be diluted with up to 20% Isoflex Clean-Up Fluid.

It is important that Isoflex Liquid Rubber is not applied directly to porous surfaces to avoid polymer starvation.

#### Slates and Tiles

Clean thoroughly and carry out necessary structural repairs. Apply Isoflex Special Primer to cementitious substrates and porous surfaces such as asbestos cement tiles. Note that a continuous membrane over tiles may inhibit ventilation of the roof void and cause internal condensation, so ensure that the adequate ventilation is provided.

#### Metal

##### Ferrous

Remove coatings, rust and scale by mechanical means or wire brushing, where rust is superficial. Apply Isoflex Special Primer to clean, dry surface as soon as possible after preparation. Do not use on deeply rusted metals,

##### Non-ferrous

Mixed substrates such as rusted galvanised sheeting should be prepared as above. Non-rusting galvanised steel should be degreased and primed with Isoflex Special Primer.

Lead, copper, brass, stainless steel:

These should be cleaned, degreased and coated with Isoflex Special Primer.

#### Wooden Surfaces

Make sure that chipboard or plywood is of exterior quality and ensure that timber has not been subjected to silicone, waxes or other water repellent treatments, remove all paint and varnish. Always use Isoflex Special Primer on timber roofs and then apply Isoflex Liquid Rubber.

## General Notes

The wet film thickness of Isoflex Liquid Rubber must not be less than 1 mm. Rough and porous surfaces will reduce coverage and extra material must be applied in order to achieve the minimum thickness required.

Two 0.5mm coats are recommended in order to minimise the possibilities of missed areas, pin holing and insufficient thickness in parts. Individual coats should not be laid with a thickness exceeding 1 mm. It is important to recoat within 24 hours of the first becoming sufficiently cured to allow operator access.

Do not dilute Isoflex Liquid Rubber. Calculate accurately areas to be treated and quantities of product required to minimise part use of cans.

Isoflex products should not be applied to a damp surface.

Prime with Isoflex Special Primer which cures to a slightly tacky film in 2-4 hours. Overcoat with Liquid Rubber as soon as possible after this time and within **48 hours**. If delay exceeds this period repriming is advised.

In order to obtain the correct minimum wet membrane thickness of 1 mm, mark out the surface into square metre areas and pour on an appropriate amount of Liquid Rubber at a rate of ½ litre per square metre per 0.5mm coat, or 1 litre per square metre per 1mm coating. Spread with brush or squeegee. Make sure the area is evenly coated. Brush marks will disappear as Isoflex is self-levelling.

The first coat should be touch-dry in 24 to 48 hours (under certain atmospheric conditions this might be slightly delayed), and the second coat should be applied within 24 hours of this stage to ensure chemical bonding between the two coats.

Use Isoflex Clean-Up Fluid to clean up. When the work cannot be finished in one day the continuation work should overlap the old by approximately 150 mm.

## FINISHES

### Chippings

If the surface is not subject to foot traffic, chippings can be applied. In such cases a three coat application of Isoflex Liquid Rubber is recommended, with the chippings added in the 3rd coat.

## REPAIRS

Minor damage to the Isoflex membrane can be repaired by removing loose membrane, cleaning down the surrounding Isoflex with Isoflex Clean-Up Fluid to provide an overlap of at least 150 mm, coating whole area with Special Primer and finishing with two coats of Isoflex Liquid Rubber.

## COVERAGE

Coverage rates vary with the porosity and roughness of surface. The quoted data below is based on average performances. A site trial is recommended.

### Isoflex Special Primer

6 to 10 square metres per litre.

### Isoflex Liquid Rubber

1 litre per square metre on a smooth surface will provide the necessary film thickness of approximately 1 mm. Any roughness, however, means an increased surface area and must be allowed for in calculating coverage. For roofs with embedded chippings estimate double the normal usage.

## IMPORTANT NOTES

**As from August 24 2023 adequate training is required before industrial or professional use.**

**For more info: [safeused@isocyanates.eu](mailto:safeused@isocyanates.eu)**

## STORAGE

Storage life of Isoflex Liquid Rubber & Special Primer is 18 months in unopened tins in temperature climatic conditions between 5°C and 25°C.

## TECHNICAL DATA

### Isoflex Special Primer

Approximate drying time: Cures to a slightly tacky film in 2-4 hours.

Period before application of Isoflex Liquid Rubber: Min. 2 hours, max. 48 hours. When applying to bitumen surfaces allow at least 4 hours before applying Isoflex Liquid Rubber.

Temperature limits for application: 0-40°C.

### Isoflex Liquid Rubber

Approximate drying time: Touch dry in 24-36 hours approximately (at 20°C, 50% relative humidity) (varies with ambient temperature). Max. cure after 7 days (at 20°C, 50% relative humidity).

Temperature limits for application: 0° to 40°C.

### Isoflex Clean-Up Fluid

Aromatic hydrocarbon based solvent.

## LIABILITY

The data on this sheet represent typical values. Since application variables are a major factor in product performance, this information should serve only as a general guide. Sherwin-Williams assumes no obligation or liability for use of this information. Unless Sherwin-Williams agrees otherwise in writing, Sherwin-Williams makes no warranties, express or implied, and disclaims all implied warranties including warranties of merchantability or fitness for a particular purpose. Sherwin-Williams will not be liable for any special, incidental or consequential damages. Your only remedy for any defect in this product is the replacement of the defective product, or a refund of its purchase price, at our option.

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