

## ISOFLEX LIQUID RUBBER WATERPROOFING SYSTEM

The Isoflex Liquid Rubber Waterproofing System comprises of three basic products: Special Primer, Liquid Rubber and Clean Up Fluid. The system is 5 times more flexible than traditional bitumen paint, providing long lasting weatherproof protection to all roofing materials.



### 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 (>50% w/v).

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 (8-24.99% w/v).

Advantages - Unlike traditional waterproofing products, 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. Accelerated weathering tests indicate no appreciable deterioration of the material.

#### Isoflex Clean-Up Fluid

Appearance - Clear, colourless liquid.

Odour - Solvent type.

VOC Content - Very High (>50% w/v).

Advantages - Moderately high flash point, low irritant level. Removes Isoflex Special Primer and Liquid Rubber whilst still wet (but not once they have cured).

### AREAS OF APPLICATION

The Isoflex Liquid Rubber Waterproofing System can be applied to all roofing substrates including felt, asphalt, slate, tiles, concrete, brick, wood, glass, metal, lead and copper.

### PREPARATION PROCEDURE

#### Cracks and Depressions

Cracks not liable to movement should be filled with a mastic filler like Thompson's Emergency Roof Repair Mastic. Allow for the solvents they contain to evaporate. Deep depressions should be treated similarly. Prime with one coat of Isoflex Special Primer.

#### Expansion Joints and Cracks Liable to Movement

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 Isoflex Liquid Rubber and whilst wet embed a 30cm scrim bandage into the surface, 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. Alternatively use a cant strip or cove fillet where verticals meet horizontals at a right angle.

#### Bituminous Surfaces (e.g. Roofing Felt, Asphalt, etc.)

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 product.

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 one coat of Isoflex Special Primer, ensuring you then apply Isoflex Liquid Rubber within 48 hours.

#### Cementitious and Porous Surfaces (Concrete, Cement, Rendering, Asbestos Sheeting, etc.)

Allow newly laid concrete to cure for at least 28 days before application. Remove any dust or dirt with a stiff bristle brush. Make sure any dusting has been thoroughly removed.

On sound surfaces - Use a brush to apply one coat of Special Primer.

On absorbent surfaces - 2 coats of Special Primer will be required, but ensure the first coat is diluted with 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, without first priming with anti-corrosion primer.

##### 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.

##### Metal Backed Flashing Strip

New metal backed flashing strips may have residual silicones on their surface. Wash with Isoflex Clean Up Fluid, allow to dry and roughen surface with sandpaper before applying one coat of 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. Apply one coat of Isoflex Special Primer, including on timber roofs.

### APPLICATION

#### General Notes

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

You can apply Isoflex Liquid Rubber with a brush, and depending on the substrate will need to apply one or two coats.

For sound, even surfaces: Apply one thick coat across the whole area. The wet film thickness should be 2mm thick.

For uneven and rough surfaces: Apply two coats across the whole area. The wet film thickness should be 1mm of each coat. Leave the coating to dry for 12 hours before applying the second coat.

Do not dilute Isoflex Liquid Rubber.

The second coat should be applied within 24 hours, otherwise the whole area will need to be re-primed with Isoflex Special Primer.

Calculate accurately areas to be treated and quantities of product required to minimise part use of cans.

## PROCEDURE

Remove all loose material by vigorous stiff brushing, use a wire brush if necessary.

Remove all fungal growth with a proprietary fungicide and wash off thoroughly with water or as recommended.

Allow surface to dry and for any moisture contained in the structure to evaporate, Isoflex products should not be applied to a damp surface.

Fill in cracks and voids with an exterior mastic filler like Thompson's Emergency Roof Repair Filler.

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 certainly within 48 hours. If delay exceeds this period repriming is advised.

In order to obtain the correct wet membrane thickness of 1mm, mark out the surface into square metres and pour the Liquid Rubber onto the surface. Spread the coating out across the surface making sure the surface is evenly coated. As the coating is self levelling you do not need to over brush the product.

In the case of a two coat application, the first coat should be touch-dry in 12-24 hours (under certain atmospheric conditions this might be slightly delayed), and the second coat should be applied within 24 hours of touch dry time to avoid re-priming.

Use Isoflex Clean-Up Fluid or an aromatic based hydrocarbon solvent to clean up.

When the work cannot be finished in one day the continuation work should overlap the old by approximately 150mm.

Second coat delay:

Should more than 24 hours elapse after the touch dry stage of the first coat, prime the entire surface with Special Primer and allow to dry before applying second coat within 48 hours.

## Airless Spray Application

Graco 45/80-1 King;

Direct immersion;

60 Mesh filter;

6-17 to 6-23 Tips;

3/8 Fluid line;

¼ Whip end;

Fluid pressure 2,500-3,000 PSI.

Note: Stir Isoflex Liquid Rubber before use with spray equipment.

## FINISHES

Although Isoflex Liquid Rubber does not degrade with UV light, high levels of solar heat gain can affect any bituminous coatings which may be beneath the Isoflex Liquid Rubber.

## 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.

## Solar Reflective Top Coats

To minimise solar heat gain, solar reflective finishes can be applied to Isoflex. An intermediate coat of Isoflex Special Primer is recommended to minimise discoloration.

Other solar reflective finishes or emulsion paints can be applied to fully cured Isoflex Liquid Rubber according to manufacturers' instructions.

## 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

6-10m<sup>2</sup> per litre.

### Isoflex Liquid Rubber

1m<sup>2</sup> per litre on a sound, even surface will provide the required wet film thickness of 1mm. 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

Always read instructions carefully before use.

Wear suitable clothing and protective gloves. Expose as little of the skin as possible.

If clothing becomes heavily splashed, remove and replace, do not re-use.

Isoflex Liquid Rubber is almost impermeable to water vapour so ensure any buildings being coated have sufficient ventilation or blistering could occur.

Isoflex Liquid Rubber cannot be applied to structures previously treated with coatings containing stearate / silicone water proofers.

## STORAGE

### Isoflex Special Primer

Keep in a cool place with lid firmly closed away from heat and sources of ignition.

### Isoflex Liquid Rubber

Keep in a cool place away from heat and sources of ignition. Avoid unnecessary opening of cans. In very cold conditions store internally before application. Do not attempt to thin Isoflex Liquid Rubber.

As Isoflex Liquid Rubber reacts with moisture in the air, once the tin is opened curing will begin. Once opened the product will only remain usable for 2 to 3 days.

### Isoflex Clean-Up Fluid

Keep in a cool place with cap tightly closed.

## DISPOSAL

Unused Isoflex Liquid Rubber and Special Primer should be allowed to cure before disposal.

Some local authorities have special facilities for the disposal of waste products.

Do not empty product into drains or watercourses.

## HEALTH AND SAFETY

Observe and follow all warnings and instructions for use shown on the pack.

Specific health and safety data sheets are available on request.

## FLAMMABILITY

Isoflex Liquid Rubber, Isoflex Special Primer and Clean-Up Fluid are flammable liquids.

Keep away from sources of ignition - no smoking.

## SUPPLY

Obtainable from DIY outlets and builders merchants.

## SIZES

Isoflex Special Primer - 750 ml.

Isoflex Liquid Rubber - 750 ml, 2.1 litre, 4.25 litre.

Isoflex Clean-Up Fluid - 500 ml.

## FURTHER 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.

Flash point: 41°C approximately.

Flammability: Flammable liquid.

### Isoflex Liquid Rubber

Colour: Black.

Physical form: Viscous liquid.

Average theoretical solids content: 90% min.

Coverage: 1.0 litre per m<sup>2</sup> (dependent on surface and service requirements).

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.

Elongation: 300% approximately.

Tensile strength: 1.7 N/mm<sup>2</sup> approx.

Flammability: Wet state - Flash point 45°C (Abel closed cup) approximately.

Accelerated weathering: After 10,000 hours no appreciable deterioration.

Resistance to:

Weathering U/V - Excellent;

Dilute acid/alkali - Excellent;

Industrial environments - Excellent;

Chemical plant fallout and fumes - Excellent;

Mechanical damage - Excellent.

### Isoflex Clean-Up Fluid

Aromatic hydrocarbon based solvent.

Flash point: 40°C.

Flammability: Flammable liquid.

## LIABILITY

Whilst these specifications are based on expert technical knowledge, practical experience and laboratory testing, the success of the Isoflex Waterproofing System depends upon the nature and condition of the surface on which the Isoflex products are applied, as well as the manner in which that surface is prepared. Without control or supervision of the preparation for and application of Isoflex products, general guarantees cannot be offered.

## INFORMATION AND SERVICE

Our Technical Services Department will be pleased to offer specific guidance or provide any further information you may require.