



SAFETY DATA SHEET ISOFLEX LIQUID RUBBER

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/ UNDERTAKING

PRODUCT NAME ISOFLEX LIQUID RUBBER
PRODUCT NO. 16149
INTERNAL ID Commodity Code 320890 91 00
SYNONYMS, TRADE NAMES SPN 10359
APPLICATION Waterproofing preparation
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2 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
1,2,4-TRIMETHYLBENZENE	202-436-9	95-63-6	10-25%	R10 Xn;R20 Xi;R36/37/38 N;R51/53
Coumarone - Indene Resin		63393-89-5	25-50%	Xi;R36/37/38.
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	202-966-0	101-68-8	2.5-10%	Xn;R20 R42/43 Xi;R36/37/38
MESITYLENE	203-604-4	108-67-8	2.5-10%	R10 Xi;R37 N;R51/53
SOLVENT NAPHTHA (PETROLEUM) LIGHT AROM.: LOW BOILING NAPHTHA	265-199-0	64742-95-6	2.5-10%	Xn;R65. Xi;R37. N;R51/53.
TOLUENE-2,4-DI-ISOCYANATE	209-544-5	584-84-9	< 1%	Carc3;R40 T+;R26 R42/43 Xi;R36/37/38 R52/53

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS

EU VOC limit value for this product (cat A/i) : 600g/l (2007) / 500g/l (2010). Contains toluene di-isocyanate. Contains diphenyl methane-4, 4-diisocyanate.

3 HAZARDS IDENTIFICATION

Flammable. Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CLASSIFICATION Xn;R20. R42/43. Xi;R36/37/38. R10, R52/53.

4 FIRST-AID MEASURES

GENERAL INFORMATION

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

INHALATION

Remove to fresh air, keep the patient warm and at rest. If breathing has stopped administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.

INGESTION

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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SKIN CONTACT

Remove contaminated clothing. Wash skin thoroughly with soap and water, or use a proprietary skin cleanser. Do NOT use solvents or thinners. Seek medical advice if any irritation persists.

EYE CONTACT

Contact lenses should be removed. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Fire can be extinguished using: alcohol resistant foam, carbon dioxide (CO₂), powder, water spray/ mist. Do not use water jet.

SPECIAL FIRE FIGHTING PROCEDURES

Fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Exposure to decomposition products may be hazardous to health. Appropriate self-contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or watercourses.

6 ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in Section 7 and 8. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth or vermiculite, and place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Clean preferably with a detergent; avoid the use of solvents. If the product enters drains or sewers, immediately contact the local water company; in the case of contamination of streams, rivers or lakes, the relevant environment agency.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Keep away from heat, sparks and open flame. Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits. Non-sparking tools should be used. Smoking, eating and drinking should be prohibited in areas of storage and use. Provide good ventilation. Avoid inhalation of vapour and spray mist. Avoid skin and eye contact. Prevent airborne concentrations higher than the occupational exposure limits. For Occupational Exposure Controls, refer to Section 8. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should only be employed in processes in which this product is used under appropriate medical supervision. This product contains a respiratory sensitiser. Advice should be taken from a competent occupational health practitioner on assessment and health surveillance of employees exposed to this product (the HSE's Employment Medical Advisory Service can advise on competency). This product contains a skin sensitiser. Hands should be inspected on a regular basis for any signs of skin damage or inflammation. If in doubt, advice should be taken from a competent health practitioner on assessment and health surveillance of employees exposed to this product (the HSE's Employment Medical Advisory Service can advise on competency).

The Manual Handling Operations Regulations may apply to the handling of containers/packages of this product.

STORAGE PRECAUTIONS

Keep containers tightly closed. Observe the label precautions. Keep in a cool, dry, well ventilated place, away from sources of heat, ignition and direct sunlight. No smoking. Store between 5°C and 25°C. Do not store near foodstuffs. Store separately from oxidising agents and strongly alkaline and strongly acidic materials.

Product will react with moisture. Do not open tins until product is to be used.

The principles contained in the HSE Guidance Note: Storage of Packaged Dangerous Substances, should be observed when storing this product.

To avoid the risk of spillage, always store and transport in a secure and upright position. Store in a dark, cool, dry, well ventilated place away from heat and sources of ignition.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ISOFLEX LIQUID RUBBER

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
1,2,4-TRIMETHYLBENZENE	WEL	25 ppm	125 mg/m3		
DIPHENYLMETHANE-4,4'-DI-ISOCYANATE	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)
MESITYLENE	WEL	25 ppm	125 mg/m3		
SOLVENT NAPHTHA (PETROLEUM) LIGHT AROM.: LOW BOILING NAPHTHA	SUP		200 mg/m3		
TOLUENE-2,4-DI-ISOCYANATE	WEL		0.02 mg/m3(Sen)		0.07 mg/m3(Sen)

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits SUP = Supplier's recommendation.

ENGINEERING MEASURES

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and/or solvent vapours below the relevant occupational exposure limits, suitable respiratory protective equipment should be worn.

RESPIRATORY EQUIPMENT

If exposure to hazardous substances identified above cannot be controlled by the provision of local exhaust ventilation and good general extraction, suitable respiratory protective equipment should be worn.

HAND PROTECTION

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

EYE PROTECTION

Eye protection designed to protect against liquid splashes should be worn.

OTHER PROTECTION

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. If clothing becomes heavily splashed, remove and replace. Do not reuse.

All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Viscous liquid.		
COLOUR	Black		
ODOUR	Aromatic. Solvent.		
SOLUBILITY	Immiscible with water		
BOILING POINT (°C)	> 150 @ 760mm Hg	RELATIVE DENSITY	1.1 - 1.15 @ 25
VISCOSITY	> 13,000 mPas @ 25	FLASH POINT (°C)	55 approx. CC (Closed cup).
FLAMMABILITY LIMIT - LOWER(%)	0.8	VOLATILE ORGANIC COMPOUND (VOC)	230 max. g/litre

10 STABILITY AND REACTIVITY

STABILITY

Stable if stored under recommended storage and handling conditions.

Avoid contact with moisture (water) prior to use.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition. Keep away from oxidising agents and strongly alkaline and strongly acidic materials.

HAZARDOUS DECOMPOSITION PRODUCTS

In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, amines and alcohols may be produced.

11 TOXICOLOGICAL INFORMATION

ISOFLEX LIQUID RUBBER

TOXICOLOGICAL INFORMATION

There is no data available on the product itself. The product has been assessed following the conventional method in CHIP and is classified for toxicological hazards accordingly. This takes into account, where known, delayed and immediate effects and also chronic effects from components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. See Sections 3 and 15 for details of the resulting hazard classification.

Exposure to organic solvent vapours in excess of the stated occupational exposure limit may result in adverse health effects such as irritation of the mucous membrane and the respiratory system and adverse effects on the kidney, liver and central nervous systems. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin.

Repeated or prolonged contact with the product may lead to removal of natural fats from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Splashes in the eyes may cause irritation and reversible local damage. Based on the properties of the isocyanate content of this product, respiratory exposure may cause acute irritation and/or sensitisation of the respiratory system, resulting in asthmatic symptoms, wheezing and a tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when exposed to airborne concentrations of isocyanates well below the occupational exposure limit. Repeated exposure may lead to permanent respiratory disability.

MEDICAL SYMPTOMS

COSHH requires that persons exposed to products containing a respiratory sensitiser at a concentration above 1% (or a lower level if indicated as such in the Approved Supply List), to be subject to appropriate health surveillance. COSHH requires that persons exposed to products containing a skin sensitiser at a concentration of above 1% (or a lower level if indicated as such in the Approved Supply List), to be subject to appropriate health surveillance. Publications giving guidance on health surveillance are listed in Section 15.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

The product has been assessed following the conventional method in CHIP and is classified for ecological hazards accordingly. See Sections 3 and 15 for details.

DEGRADABILITY

There is no data available on the product itself.

ACUTE FISH TOXICITY

There is no data available on the product itself.

WATER HAZARD CLASSIFICATION

There is no data available on the product itself. The product should not be allowed to enter drains or watercourses, or be deposited where it can affect ground or surface waters.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Do not allow into drains or watercourses, or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act. Using information provided in this data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers.

14 TRANSPORT INFORMATION

GENERAL

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that person's transporting the product know what to do in an accident or spillage.

Limited Quantity concessions may apply to the carriage of this product.

No transport warning sign required.

UK ROAD CLASS

N/C

ADR CLASS

Not dangerous according to
ADR.

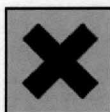
UN NO. SEA

N/C

15 REGULATORY INFORMATION

LABELLING

ISOFLEX LIQUID RUBBER



Harmful

CONTAINS

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE
TOLUENE-2,4-DI-ISOCYANATE

RISK PHRASES

R10	Flammable.
R20	Harmful by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R42/43	May cause sensitisation by inhalation and skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S2	Keep out of the reach of children
S7/9	Keep container tightly closed and in a well-ventilated place.
S13	Keep away from food, drink and animal feeding stuffs.
S23	Do not breathe vapour/spray.
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well-ventilated areas.
S56	Dispose of this material and its container to hazardous or special waste collection point.
S63	In case of accident by inhalation: remove casualty to fresh air and keep at rest.
P4	Contains isocyanates. See information supplied by the manufacturer.

UK REGULATORY REFERENCES

The product is classified and labelled for supply in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations [CHIP]

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks as required by other health and safety legislation.

The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

The Manual Handling Operations Regulations

The Chemicals (Hazard Information and Packaging for Supply) Regulations.

The VOCs in Paints, Varnishes and Vehicle Refinishing Products Regulations 2005.

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations.

European Agreement concerning the International Carriage of Dangerous Goods by Road [ADR]

EU DIRECTIVES

Dangerous Substance Directive 67/548 Dangerous Preparations Directive 88/379 Safety Data Sheet Directive 91/155

GUIDANCE NOTES

Workplace Exposure Limits EH40.

ISOFLEX LIQUID RUBBER

Respiratory sensitisers and COSHH - a guide for employers, INDG95.

Isocyanates:health hazards and precautionary measures, EH16.

Surveillance of people exposed to health risks at work, (ISBN 0 11 885574 3)

16 OTHER INFORMATION

GENERAL INFORMATION

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

For specific guidance contact Ronseal Technical Services. [Helpline +44 (0) 114 240 9469] ; Email: enquiry@ronseal.co.uk

REVISION COMMENTS

Revised Transport Information.

ISSUED BY

S. Russell

REVISION DATE 11-07-2006

REV. NO./REPL. SDS
GENERATED 10359/0

SDS NO. 10359/1

DATE 11-07-2006

SIGNATURE K. R. P. Winder.

RISK PHRASES IN FULL

R10	Flammable.
R20	Harmful by inhalation.
R26	Very toxic by inhalation.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
R40	Limited evidence of a carcinogenic effect.
R42/43	May cause sensitisation by inhalation and skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

DISCLAIMER

Information contained in this Safety Data Sheet is based on data considered to be accurate at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. ,
The supplier accepts no responsibility whatsoever (except otherwise provided in law) for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the product.

PRODUCT DATA SHEET

No.11043/45/46

JANUARY 2002

ISOFLEX HIGH PERFORMANCE 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.

INTRODUCTION

There are a variety of causes for the eventual breakdown of roofs. The most common is thermal movement, the cyclic pattern caused by heating and cooling that stresses all building materials. Then there is moisture movement, which can cause twisting and warping as well as the cracking that occurs with drying out and shrinkage. The sun plays its part too; solar radiation and oxidation degrade bitumen and mastic asphalts, and high surface temperatures can cause felt and asphalt roofs to slip and creep. Finally man's own efforts can encourage degeneration through poor design and workmanship. Many flat roofs for example suffer the effect of vapour pressure of "drive" on account of inadequate insulation and ventilation systems.

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.

Common remedial procedures can involve resurfacing with hot and cold applied bitumens and tars. It can also mean the removal of the deteriorated materials and their complete

replacement. Frequently these processes require the specialist skills and equipment roofing contractors have.

Although used infrequently on domestic buildings until recent times, specialised membranes have been used on industrial and commercial buildings for many years now. Generally these are in sheet or liquid form and applied by the contractors with specialist training provided by the manufacturers. One such system, and one that has been modified so that it can also meet the requirements of the untrained member of the public or small builder without special equipment, is the ISOFLEX Liquid Rubber Waterproofing System.

Isoflex Liquid Rubber, which is based on a moisture curing urethane elastomer, was initially developed in 1974. Today it is produced in greater volume than any other elastomer in the UK and is the only one widely available at the retail level.

Isoflex is distinguished in formulation by its unusually high solids content, high tensile strength, durability and storage life stability. Of equal importance, Isoflex offers unrivalled reliability: large scale manufacture under scientifically controlled conditions; continuous systematic testing; and the selection of the highest grade raw materials provide the

quality so essential for consistently good on-site performance.

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 - Medium (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.

It is easily and quickly applied. It requires no mixing, stirring or heating and can be applied manually at a rate of 40 m² per man hour or up to 600 m² per day by spray.

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.

Storage life is over 18 months in temperature climatic conditions.

As it cures by reaction with atmospheric moisture, Isoflex Liquid Rubber can be successfully used in a wide range of temperatures.

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).

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

Balconies and Boat Decks

Isoflex liquid Rubber can be used for balconies and decks not subject to heavy foot traffic. In such cases, at least three coats must be applied. A reinforcing scrim, embedded into the second coat, is recommended. In order to improve foothold, finely ground aggregate or sand can be broadcast over the third coat as it dries.

Ponds and Water Systems

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

Other Surfaces or Materials

This information sheet relates to commonly found roof surfaces and is not a comprehensive guide to all potential surfaces and materials on which the Isoflex System might be used.

Further information can be obtained on application.

APPLICATION PROCEDURE

General Conditions

Isoflex Liquid Rubber and/or its Primer will bond to anything within their specified limits, but if the contact surface does not adhere firmly to the supporting substrate or, for instance, the contact surface contains silicones or has been treated with a silicone based water repellent, failure may eventually occur.

Heated occupied building create internal vapour pressure that seeks to escape through the roof. Felt blistering is a common symptom of this effect. As Isoflex Liquid Rubber is almost impermeable to water vapour, the ventilation systems within the structure of the roof should be examined where "vapour drive" is likely to occur.

General Substrate Preparation

Cracks and Depressions

Cracks not liable to movement should be filled with Isoflex Wetpatch or other mastic filler. Allow for the solvents they

contain to evaporate. Deep depressions should be treated similarly. Prime 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 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 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. Alternatively use a cant strip or cove fillet where verticals meet horizontals at a right angle.

Special Substrate Preparation

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 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 (Concrete, Cement, Rendering, Asbestos Sheeting, etc.)

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, 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 abrasive paper before applying Isoflex Special Primer and Liquid Rubber.

Wooden Surfaces

Remove all paint and varnish and apply Isoflex Liquid Rubber directly to a clean, dry surface. Where wood is unseasoned and likely to be damp or porous, such as plywood and chipboard, apply Isoflex Special Primer first. Always use Isoflex Special Primer on timber roofs. 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.

Manual Application

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.

The membrane can be laid either in one 1 mm coat or two 0.5 mm coats. Two coats are recommended with uneven and jointed surfaces in order to minimise the possibilities of missed areas, pinholing and insufficient thickness in parts. Individual coats should not be laid with a thickness exceeding 1 mm.

In the case of two applications, 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.

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 Isoflex Wetpatch or other exterior mastic filler, in accordance with the preparation instructions above.

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 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 coat, or 1 litre per square metre for a single coat application. (Larger areas can be calculated on the same basis). Spread (but not brush out) with brush or squeegee. Make sure the area is evenly coated. Brush marks will disappear as Isoflex is self-levelling.

In the case of a two coat application, 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 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 150 mm.

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 trail 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

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.

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. The self-levelling properties of Isoflex Liquid Rubber allows it to be poured onto the surface and spread with a brush or squeegee. In very cold conditions store internally before application. Do not attempt to thin Isoflex Liquid Rubber.

Isoflex Liquid Rubber and Special Primer cure by reaction with atmospheric moisture. Once opened they begin to cure and even if resealed a skin will form. This can be removed if products are used within approximately one month. It should be noted that badly dented containers could allow ingress of moisture and the commencement of curing.

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.

Isoflex Clean-Up Fluid

Keep in a cool place with cap tightly closed. Do not dispose into domestic drainage systems.

HEALTH AND SAFETY

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

Keep all Isoflex products away from children.

Wear suitable clothing and protective gloves. Once cured neither Isoflex Special Primer or Liquid Rubber can be removed, even with Isoflex Clean-Up Fluid.

Use only on outside surfaces and ensure good ventilation.

Isoflex Liquid Rubber

Isoflex Liquid Rubber is harmful by inhalation. May cause sensitisation by inhalation.

Flammable.

Keep out of reach of children.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Use only in well ventilated areas.

Contains isocyanates. See information supplied by the manufacturer.

If swallowed seek medical advice immediately and show container/label.

After contact with skin, wash immediately with plenty of soap and water or a proprietary skin cleanser. Do not use solvent of thinners/white spirit.

Repeated exposure may cause skin dryness or cracking.

Do not breathe vapour/spray.

When spraying wear suitable respiratory protective equipment.

Isoflex Special Primer

Keep out of reach of children.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed seek medical advice immediately and show this container/label.

Use only in well ventilated areas.

Contains isocyanates. See information supplied by the manufacturer.

After contact with skin, wash immediately with plenty of soap and water or a proprietary skin cleanser. Do not use solvent or thinners/white spirit.

Repeated exposure may cause skin dryness or cracking.

Do not breathe vapour/spray.

When spraying wear suitable respiratory protective equipment.

Isoflex Clean-Up Fluid

Keep out of reach of children.

Keep away from sources of ignition - no smoking.

Avoid contact with skin and eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed seek medical advice immediately and show container/label.

After contact with skin, wash immediately with plenty of water.

Repeated exposure may cause skin dryness or cracking.

Ensure maximum ventilation during application and drying.

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, 2.5 litre.

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

Isoflex Clean-Up Fluid - 500 ml.

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: 61°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 m² (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/mm² approx.

Flammability: Wet state - Flash point 54°C (Abel closed cup) approximately.

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

Resistance to:

Weathering UV - Excellent;

Dilute acid/alkali - Excellent;

Industrial environments -

Excellent;

Chemical plait fallout and fumes -

Excellent;

Mechanical damage - Excellent.

Isoflex Clean-Up Fluid

Aromatic hydrocarbon based solvent.

Flash point: 43°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.

Ronseal has been registered to BS EN ISO 9000 1994 (Registered Firm No. FM 1669/1).

Ronseal Ltd. Operates an Environmental Management System that complies with the requirements of BS 7750:1994, certificate No. EMS 35924.

Ronseal Ltd. has achieved Investors in People certification, (certificate number 59586).

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JANUARY, 2002
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