

## Liquid Seal

### Water Based Membrane

#### DESCRIPTION

Liquid Seal is a water-based membrane for the sealing and long term protection of external surfaces which combines a high degree of extensibility, with considerable cohesive strength and water resistance. Liquid Seal has the ability to absorb considerable substrate movement and to bridge developing cracks. It is thus eminently suitable to provide continuous flexible weatherproof membranes over roofing areas which may be composed of a multitude of structural members.

#### RECOMMENDED APPLICATIONS

For the deposition of weather resistant flexible membranes over large roof areas. For reclamation and repair of old roofing. For general waterproofing and sealing

#### PERFORMANCE DATA

Adhesion good to all roofing substrates, concrete, masonry, cement sheeting, steel, galvanised iron, aluminium, bitumen, wood, hardboard, vinyl, polystyrene and polyurethane foam.

Resistance to UV radiation: when applied as a membrane suitable for long term protection under all climatic conditions.

Resistance to water: when fully cured resists the action of ponded water, growth of fungi and may remain submerged under water for extended periods of time.

Toxicity: free of any elutable toxic materials, suitable for contact with potable water. Restricts permeation of gases, may be used to seal controlled atmosphere fruit storage areas against penetration of oxygen and grain silos against loss of fumigant.

Application: may be deposited in coatings up to 1000u wet which will level out and dry to smooth film with silky appearance without wrinkling, crazing or mud cracking.

In common with all water based coatings should not be applied under conditions of low temperatures and/of high humidities or with rain imminent.

#### SURFACE PREPARATION

Liquid Seal may be applied to most surfaces without priming provided they are clean, free from grease, oil and any loose matter, and where necessary have been mechanically and chemically cleaned.

#### APPLICATION

Liquid Seal may be applied by all conventional means such as brush, roller,

airless spray, or it may be poured onto horizontal surfaces and then spread by means of any suitable applicator such as notched trowel, broom or rake. However to achieve optimum adhesion it is advisable to apply the first coat by brush. Liquid Seal should not be used when conditions of low temperatures (<10°C) and/or high humidities prevail. At high temperatures and particularly under windy conditions, application may become difficult due to the fast rate of drying being experienced. To alleviate this Liquid Seal may be thinned with water, however at the expense of film build properties.

On porous or highly absorbent surfaces such as for instance, cement sheeting and particularly under hot and dry conditions, it will be necessary to dilute the first coat of Liquid Seal with water to ensure satisfactory penetration and keying. A full membrane coat may then follow. Whilst the dilution ratio is not critical it is advisable to add the minimum amount of water to obtain a free flowing composition which may be easily brushed into the substrate. Alternative techniques to the above to obtain good keying on a porous surface include working with a wet brush (dip brush in water before picking up Liquid Seal) or coating onto a thoroughly wetted out surface (hose concrete down with water). Under difficult and adverse conditions Chemprime ZNC may be used as a primer.

Liquid Seal has excellent high built properties and under favourable conditions coating thickness of up to 2mm wet may be obtained in one single application. This however may not always be practicable as drying/curing times will increase in proportion to the coating thickness.

In bridging large cracks or joining multiconstructional components a reinforcing tape or mesh may be used. The tape is laid into the wet layer of Liquid Seal, allowed to dry and overcoated with further liquid Seal.

It is recommended that for good all-round weather protection coating weights of 1 litre/m<sup>2</sup> be applied (approx dry film thickness 600u). The effect of weathering on Liquid Seal is a slow chalking and ablation of the surface layers, which relates effective service life of Liquid Seal to membrane thickness.

Liquid Seal has a built-in latent curing mechanism which is activated by the loss of water. In the drying/curing process of a Liquid Seal membrane there are therefore three distinct stages: (a) loss of water, (b) surface cure or skinning, and (c) complete through cure. Loss of water or drying of the membrane determines the overcoating time, whilst the surface cure determines the rate at which weather resistance or resistance to ponded water is acquired. Though these times may vary considerably depending on temperature, humidity, air movement, coating thickness and type of substrate the following data may serve as a general guide. (20-22°C, 60-65% RH)

Coating Thickness	100u	500u
Overcoating	2 hours	16 hours
Weather resistance	6 hours	24 hours
Through cure	4 weeks	8 weeks

It is obvious that in poor weather conditions it is better to apply multiple coats than one heavy coat.

Thinning: Should be required but water under extremely hot conditions.

#### PREPARATION OF ROOFING

Any cracks, joints or holes should prior to application of Liquid Seal be filled with Chempatch Universal Repair and Patching Compound. Any rusty metal roofing should be wire brushed, cleaned and primecoated with Chemprime ZNC.

New galvanised iron may also be prime coated as above to increase adhesion.

Large gaps subject to considerable movement should be bridged with reinforcing mesh according to established practice.

#### CLEAN UP

For best results LS detergent solution in water followed by LS detergent solution in Mineral Turps.

#### PACKAGING

4 litre and 20 litre plastic containers

#### HAZARD & FIRST AID

Refer to Material Safety Data Sheet

#### TECHNICAL DATA

Base	Modified acrylic
Vehicle	Water
Solids	72% (weight) 59% (volume) approx
Specific gravity	1.43 approx
Colour	Light grey, other colours on request
PVC	33% approx
Viscosity (Brookfield)	100 cps approx
Tensile strength (1mm film)	1800 KPa (28 days 20°C 1700 KPa (2000 hrs QUV) approx
Elongation	210% (28 days 20°C) 200% (2000 hrs

(1mm film)

Flexibility

Resistance to water

Permeability

Abrasion

Resistance

Temperature

Flammability

Toxicity

QUV) approx

Excellent, 2mm film, 180° angle – no cracks

Excellent, 100u film, 4 hrs, 20°C, 50% RH.

No effect on exposure to running water.

Water vapour

1.32 x 10<sup>-9</sup>/Pa/sm<sup>2</sup> (.23 inch/ pound) approx

400 mg (Taber CS17, 1000 cycles approx

1000g load. Minimum Film Forming

5°C approx

Non flammable

Non-toxic

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All statements and technical information contained herein are based on tests we believe to be reliable but the accuracy thereof is not guaranteed.

Users assume all risks and liability resulting from the use of this product and must confirm the suitability thereof by their own tests.

Conditions of Sale contain a limited warranty against manufacturing defects.

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