

Technical
Information

SOLUTAN

PU Aluminium

Elastomeric Waterproofing

Product No: 9002

Description:

Solutan PU Aluminium elastomeric membrane is a liquid applied coating based upon urethane prepolymers, which cure by reaction with atmospheric moisture to give a continuous film which is rubbery and elastic. It contains leafing aluminium which gives excellent U.V. resistance.

Solutan PU Aluminium is a very high solids coating designed to give a high-build film. It can be brush or spray applied (with airless spray equipment) but it has a higher viscosity than a conventional paint and should not be diluted.

Solutan PU Aluminium cures to a permanently flexible seamless membrane which, by virtue of its chemical reactivity in the wet state, has good adhesion to a wide range of substrates (given proper preparation) such as roofing asphalt, slates, tiles, asbestos, concrete, brick, wood, glass and metals. Unlike more traditional bitumen based products Solutan PU Aluminium does not readily embrittle with age, exposure to ultra violet radiation or weathering and hence it does not crack or craze.

Since it is elastomeric Solutan PU Aluminium is not adversely affected by extremes of temperature consequently it is resistant to cracking at low temperatures and does not suffer flow at elevated temperatures.

Solutan PU Aluminium can be applied by brush, airless spray or roller without the need to mix, stir or heat before application.

Areas of Application:

Solutan PU Elastomeric Membranes are designed to bond to many types of substrate particularly those commonly used as roofing, such as felt, asphalt, slate, tiles, asbestos, concrete, brick, wood, glass and metals. They can also be applied to sprayed polyurethane (p.u.) foam insulation. However, it is essential that substrate and structures are properly prepared and stable.

Surfaces previously treated with silicone based materials will inevitably be difficult to overcoat and this should not be attempted with Solutan products.

Substrates with poor adhesion to the underlying structure (e.g. blistered roofing felt) may also cause problems in providing sound over-coating.

Preferential vapour drive in buildings must also be borne in mind when over-coating the roof and it may be judged expedient to employ ventilation to cope with transmission of high levels of moisture vapour.

Method of Application:

The dry film thickness (DFT) of Solutan PU Aluminium should not be less than 0.5 mm or more than 1.0 mm for each coat. Rough or textured surfaces will reduce the coverage rate and consequently more material must be allowed to achieve the minimum D.F.T.

Solutan PU Aluminium is a membrane coating, not a paint and as such protection is only achieved with a high film build, i.e. 1 mm minimum. It is therefore essential that this is achieved. The membrane can be applied in one 1mm or two 0.5 mm coats. Two coats are recommended on uneven and jointed surfaces to minimise the possibility of thin patches, missed areas and pinholing. In the case of two coat application, it is important to re-coat within 24 hours of the first coat becoming sufficiently cured to allow operator access.

Do not dilute Solutan PU Aluminium.

Method:

1. Remove all loose material by vigorous brushing, wire brush if necessary.
2. Treat any remaining fungal growth with proprietary fungicide as recommended.
3. Allow surface to dry thoroughly and any moisture contained in the structure to evaporate. Solutan PU Primer and Solutan PU Aluminium should not be applied to damp substrates.
4. Fill cracks and voids with a mastic sealant.
5. Prime with Solutan PU Primer (6-10m²/ltr) (depending on substrate texture and porosity) which cures to a slightly tacky film in 2-4 hours. Overcoat with Solutan PU Aluminium as soon as possible after this time and certainly within 48 hours. If delay exceeds this, re-priming is advised.
6. Apply Solutan PU Aluminium at a maximum film thickness of 0.5 mm for two coat application and 1 mm for one coat.

7. In the case of two coat application, the first coat should be touch dry in 12-48 hours (in some conditions this might be delayed) and the second coat should be applied within 24 hours of this stage to ensure good adhesion.
8. Second coat delay: if more than 24 hours elapse after the touch dry stage of the first coat, prime the entire surface with Solutan PU Primer and allow to dry before re-coating within 4-8 hours.
9. Day-work joints - where application extends over more than a working day, an overlap of 150 mm should be used.
10. Aromatic hydrocarbon solvent should be used to clean equipment etc.

Spray Application:

- * Only airless spray should be used.
- * Graco King 60 to 1 ratio or similar.
- * Compressor: 100 psi, 60 cfm min.
- * Tip Size: 28/30 thou. 60 deg angle.

Application Rate:

Solutan PU Aluminium is easily and quickly applied manually at a rate of 40 m² per man hour or up to 600 m² per day by spray application.

Repairs:

Minor damage to Solutan PU Aluminium can be repaired by removing loose membrane, cleaning the surrounding area with aromatic hydrocarbon solvent overlapping by 150 mm priming the area with Solutan PU Primer and finishing with two coats of Solutan PU Aluminium.

Coverage:

Coverage rates may vary with surface texture and porosity. The information given is based on average usage. A site trial is recommended.

Solutan PU Primer - 6-10 m²/ltr

Solutan PU Aluminium - 1 kg (0.8 ltr)/m² on a smooth surface will provide an adequate film thickness of approx 1mm. Any surface texture will increase the surface area which must be allowed for when calculating usage e.g. on a chipping embedded surface the actual area will be approx doubled.

Storage:

Store in a cool place and avoid unnecessary opening of cans. In very cold conditions store inside before using - do not attempt to thin.

Once opened Solutan PU Aluminium will start to cure and a skin will form, even on re-sealed cans. This can be removed if material is used within approximately a month.

Health and Safety:

The recommendations in our material safety data sheet (MSDS) ref. 05 should be followed at all times.

- * Paint Product UN 2810.
- * Keep out of reach of children.
- * Keep away from sources of ignition.
- * No Smoking.
- * Do not breathe vapour/spray.
- * Ensure good ventilation during application and drying.
- * In case of eye contact - wash with plenty of clean water and seek medical advice.
- * Avoid prolonged skin contact - wear suitable protective clothing and gloves.
- * Remove from skin with mild solvent/hand cleanser and wash with warm soapy water
- * Contains isocyanate. Specific information available on request.

Technical Data:

S.G.		1.18
Solids	% min.	95
Abel closed cup flash point	degC	56
Application limits	degC	0-70
Approximate Dry time	(20 deg C, 50% RH)	12-20 hours touch dry - 7 days full cure
Elongation	%	500
Tensile Strength	MN/m ²	2.07
Accelerated Weathering	12000	No appreciable deterioration
U/V Resistance		Excellent
Hydrolysis Resistance		Excellent
Resistance to Industrial Environments		Excellent
Mechanical Damage		Good
Storage Stability (temperate climate)		9 months

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