

ELASTOMERIC WATERPROOFING MEMBRANE

ONE PART POLYURETHANE

PRODUCT DESCRIPTION

DURAROOF AD 451/B elastomeric membrane is a liquid applied coating based on urethane prepolymers extended with tar, which cures by reaction with atmospheric moisture to give a continuous film which is rubbery and elastic.

DURAROOF is a high solids coating designed to give a high build film. It can be brushed, squeegee or spray applied (with airless spray equipment). **DURAROOF** has a higher viscosity than a conventional paint.

DURAROOF AD 451/B 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. Unlike more traditional bitumen based products, **DURAROOF** 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, **DURAROOF** AD 451/B 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.

TYPICAL APPLICATIONS

- Waterproofing roof decks, exposed or inverted.
- Below ground waterproofing for basements or foundations.
- Waterproofing water containing structures such as swimming pools and water tanks that are not for potable water.
- Waterproofing "wet areas", bathrooms, kitchens, toilets and showers before screeding and tiling.
- Waterproofing planter boxes and balconies.
- Waterproofing sewerage canals.

Note: For maintenance waterproofing in occupied buildings, we recommend the use of our **DURAROOF** AD 451/TF Tar Free liquid membrane which has a low odour.

DURAROOF AD 451/B is a membrane coating, and as such protection is only achieved with a high film build, i.e. 1mm minimum. It is therefore essential that this is achieved. The membrane can be applied in one 1mm or two 0.5mm 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 applications, it is important to re-coat within 24 hours of the first coat becoming sufficiently cured to allow operator access.



METHOD OF APPLICATION

The dry film thickness of **DURAROOF** should not be less than 0.5mm or more than 1.5mm for each coat. Rough or textured surfaces will reduce the coverage rate and consequently more material must be allowed to achieve the minimum dry film thickness.

APPLICATION

- 1) Remove all loose material by vigorous brushing.
- 2) Treat any remaining fungal growth with proprietary fungicide as recommended.
- 3) Allow surfaces to dry thoroughly and any moisture contained in the structure to evaporate. **DURAROOF** should not be applied to damp substrates.
- 4) Fill cracks and voids with a polyurethane mastic sealant.



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APPLICATION CONTINUED

- 5) Only if necessary, prime with DURAROOF PU PRIMER depending on substrate texture and porosity. Apply the first coat of DURAROOF AD 451/B after 24 hours or within 48 hours. If delays exceed this, re-priming is advised. DO NOT PRIME new sand/cement screed or concrete surfaces.
- 6) Apply DURAROOF at a film thickness of 0.5mm/m²/coat for two coat applications and 1mm for one coat applications.
- 7) In the case of two coat applications, 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 48 hours elapse after the touch dry stage of the first coat, prime the entire surface with primer and allow to dry before re-coating within 4 to 8 hours.
- 9) Day-work joints, where application extends over more than one working day, overlap existing joint by 150mm.
- 10) Toluene solvent should be used to clean equipment.
- 11) DURAROOF AD 451/B Vertical Grade may be used for vertical applications.

APPLICATION RATE

DURAROOF AD 451/B is easily and quickly applied at a manual rate of 40m² per man hour or up to 600 m² per day. Coverage rates will vary with surface texture and porosity. The information given is based on average usage. A site trial is recommended. DURAROOF AD 451/B 1kg (0.8 Lt/m²) on a smooth surface will provide an adequate film thickness of approximately 1mm. Any surface texture will increase the surface area which must be allowed for when calculating usage. Do not thin DURAROOF AD 451/B.

EXPOSED ROOF DECKS

For exposed roof deck waterproofing, the use of DURAROOF AD 451 Aluminium is recommended, or DURAROOF AD 451/TF Tar Free Coating. This should be applied at the rate of 0.5kg/m² in a two coat application. These coatings provide a good light and heat reflective surface and will take light foot traffic.

CURING AND PROTECTION

DURAROOF AD 451/B must be allowed to cure for at least 24 hours at 25°C. Maximum cure takes 7 to 10 days.

FLOOD TEST

We recommend that after the waterproofing work has been completed, the waterproofed area should be flood tested to a minimum depth of 50mm of water for at least 24 hours.

STORAGE

Do not store in direct sunlight. Store in a cool place out of sunlight, below 30°C. Avoid unnecessary opening of drums. In very cold conditions store inside before use. The shelf life of the unopened drum is 9 months. Once opened DURAROOF AD 451/B 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.

TECHNICAL DATA

Container size	25kg
Cure time	12-24 hours
Maximum cure to strength	10 days
Application temperature	0°C - 50°C
Elongation ASTM D412	650%
Recovery from elongation	98%
Tensile strength ASTM D412	2.0 N/mm ²
Moisture vapour permeability ASTM E 96 At 1.2 mm	12.5gms.m ² /24 hours
Dry film thickness	1.2mm
Solids Content	98%
Storage Life (unopened)	9 Months
Resistance to Industrial Environments	Excellent
Tear Strength ASTM D 624	12.5 N/mm

HEALTH AND SAFETY

- Protective gloves and masks should be used.
- Wash hands with soap and water.
- Ensure good ventilation.
- Do not smoke or drink.
- Full Health and Safety information is given on a separate sheet available on request.

DURAROOF PRODUCT RANGE DURAROOF

AD 451/TF Tar Free PU Membrane. DURAROOF AD 451 Aluminium PU Membrane. DURAROOF AD 451/B11 Two Part PU Membrane. DURAROOF PU Primer.

DURAROOF AD 520 PU Grout Water stop.

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