

Technical Data Sheet

Emer-Clad Waterproofing

Acrylic, flexible waterproofing membrane, for internal and UV exposed external areas - colour range available

USES

As a sunlight exposed waterproofing membrane for decks, balconies, roofs, and gutters. On roofs and balconies, Emer-Clad provides a durable, slip resistant, waterproof finish which will accept regular foot traffic.

Emer-Clad is suitable for application to many common substrates including concrete, fibrous cement products, metals, timber with priming required on most substrates.

ADVANTAGES

- Proven track record for over 20 years
- Water borne acrylic formulation
- Easy water clean up
- One component - readily applied direct from pail
- Excellent resistance to UV, weathering, chloride ions and CO₂
- Excellent build properties enable application to both horizontal and vertical surfaces
- Can be applied to a wide range of substrates
- Available in a select range of standard colours - can be tinted to over 800 colours
- Highly flexible - accommodates movement and minor cracking of substrates
- Excellent resistance to embrittlement
- Contains additives to inhibit growth of mould and bacteria
- Can be applied over existing hairline cracks and capable of accepting live crack movement of up to 1 mm



DESCRIPTION

Emer-Clad is a single component water borne, high solids, acrylic copolymer waterproof membrane which offers excellent sunlight and UV resistance. Emer-Clad may be applied over a wide range of construction materials by brush, roller or airless spray, when used in combination with the appropriate primer.

TECHNICAL SUPPORT

Parchem offers a comprehensive range of high performance, high quality products suitable for use within all aspects of the concrete repair and protection industry. In addition, the company offers a technical support package to specifiers, end users and contractors, as well as on-site assistance.

PARCHEM	CONCRETE REPAIR	FLOORING	JOINTING SYSTEMS	WATERPROOFING
TECHNICAL DATA SHEET	SEPTEMBER 07			
www.parchem.com.au	7 Lucca Road, Wyong NSW 2259	Sales 1800 624 322	Technical 1800 812 864	ABN 80 069 961 968

DESIGN CRITERIA

In waterproofing applications, Emer-Clad is designed to be applied by brush, roller or airless spray over the appropriate primer, to achieve a total dry film thickness of not less than 500 microns in three or more coats.

MAINTENANCE

No special requirements, any damage identified during normal inspections should be repaired or replaced as appropriate.

SPECIFICATION CLAUSES

ROOFS AND DECKS

Where so designated on the drawings surfaces shall be waterproofed with a high performance, UV resistant, acrylic high build waterproofing membrane. The membrane may be reinforced with a non-woven polyester fabric, if required, and applied with a minimum 3 coats to achieve a total minimum dry film thickness of 500 microns.

The high build acrylic membrane shall be Emer-Clad.

All surfaces shall be prepared, primed and the membrane applied in accordance with the current Emer-Clad Technical Data Sheet.

PROPERTIES

Primary colour range:	white, light grey, mid grey, sandstone, cream
Volume solids:	53% (Matt white) 45% (Satin white)
Physical or chemical change:	Dries through loss of water
Drying (25°C, 50% RH)	
Tack free	30 minutes
Recoat:	2 hours
Fully dried:	7 days
Application temp:	10°C - 30°C
Carbon dioxide transmission (Klopfer criterion R>50m)	- Matt R = 266m - Satin R = 266m
Water vapour diffusion resistance (Klopfer criterion S_D < 4 m)	- Matt S _D = 1.65 m - Satin S _D = 1.25 m
Water permeability: ASTM E514-7A:	Class E Highest resistance to water penetration

Exterior durability results on FC panels (GPC):

Cape Shank (Coastal)	239 months
Port Melbourne (Industrial)	210 months
Yallourn (Industrial)	189 months
Darwin (Tropical)	233 months

No integrity failure on any of the panels at all the above sites - GPC Scientific Services Laboratory

Acoustic dampening

Properties:	500 micron sample of Emer-Clad on Lysaght "Custom Orb" 26 gauge thickness corrugated steel sheet
--------------------	--

Effective noise

reduction:	2 - 7 dB
-------------------	----------

Chemical resistance:	Emer-Clad is unaffected by a range of mild acids, alkalis, and is resistant to bio-deterioration
-----------------------------	--

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

All surfaces to be coated are to be clean, sound and dry, free of mould release agents, bond breaking coatings, curing compounds or any other contamination that may affect coating. New concrete and rendered surfaces to be allowed to cure thoroughly before application of any materials.

Concrete surfaces should be smooth, any imperfections, pinholes etc. to be filled and surfaces made smooth with Emer-Patch (smooth) and trowelled to an even finish.

Moss or lichen should be removed physically, and the surface then treated with a solution of household bleach (1 part bleach to 2 - 3 parts water) to kill any spores. The bleach solution to be allowed to react for 10 - 15 minutes and then be completely removed with clean water and the surface allowed to dry.

Where Emer-Clad is to be applied to an exposed deck, the moisture content of the substrate must be checked using a moisture meter. Emer-Clad should not be applied to substrates having a moisture content greater than 80% RH. If any doubt exists regarding the moisture content of the substrate, moisture barrier coatings or priming, contact Parchem Technical Services for advice.

PRIMING

Parchem manufactures a range of primers for use with the Emer-Clad.

Emer-Coat Clear Sealer, a solvent borne penetrating sealer must be used on concrete, masonry, rendered or other cementitious surfaces as well as fibre cement sheeting and previously painted surfaces etc.

Durafloor Moisture Barrier or Emer-Aquashield, a water borne epoxy coating can sometimes be used for suspect damp substrates. Advice should be sought for this type of situation.

MOVEMENT JOINTS

Ideally, Emer-Clad should not be applied over movement joints as the amount of movement may be more than the capability of the membrane. Joints should be first sealed with the appropriate joint sealant then the Emer-Clad applied up to the edge of the joint. When this is not practical, all expansion and movement joints should be sealed with a suitable elastomeric joint sealant such as Emer-Seal PU 25 and allowed to cure. Once cured, the sealant surface must be covered with a strip of polyethylene bond breaker tape. In all applications where Emer-Clad is applied over movement joints or at floor to wall junctions, Emer-Clad must be reinforced with a suitable polyester fabric such as Sontara. The reinforcing fabric must extend at least 100 mm either side of the joint.

Glass fibre reinforcing must not be used as glass fibres reduce the elasticity of the membrane and are difficult to wet through. Glass fibre mat reinforcing has been shown to create a weak delamination layer in the membrane and glass fibres that are not fully encapsulated with Emer-Clad have been shown to cause a 'wicking' effect allowing water to pass through the membrane.

APPLICATION

Emer-Clad may be applied by brush, roller or airless spray. Application of Emer-Clad by airless spray is best achieved using a 3000 psi line pressure and a 19 - 21 thou' spray tip which gives an ideal product spread via a 25 cm spray fan.

When used in waterproofing applications, Emer-Clad must always be applied with a minimum of three coats to achieve minimum total DFT (dry film thickness) of 500 microns. On exposed decks where a satin finish is required, it is advisable to apply at least 2 coats of matt followed by at least one coat of satin.

Emer-Clad must never be diluted with water as this will lead to a reduction in dry film thickness as well as the creation of micro foam when water is mixed into the product.

Emer-Clad can be applied in 2 ways, either fabric reinforced or unreinforced. When applying Emer-Clad to decks where reinforcing is not required, apply at least 3 coats of Emer-Clad at a WFT (wet film thickness) of 350 microns per coat. Allow 2-4 hours drying time between each coat. At low temperatures, high humidities or in confined spaces, longer drying times may be required.

Where Emer-Clad is to be applied with reinforcing, apply 350 microns of Emer-Clad onto the substrate and immediately apply the pre-cut to size, Sontara or Reemay fabric, onto the fresh wet surface of the Emer-Clad already

applied. Position the fabric carefully so as not to create wrinkles or entrap air. Immediately, apply another 350 micron WFT layer of Emer-Clad over the fabric, wet on wet, so as to encapsulate the polyester reinforcing fabric. Always work in one direction making sure to fully wet through the fabric and exclude any trapped air as the application progresses.

Care must be taken to make sure that application of the first wet laid does not get too far ahead of the fabric, and that the fabric is not laid too far ahead of the 2nd wet layer. Under normal weather conditions, work about 1 metre at a time applying the membrane, fabric and membrane, wet on wet before moving on.

In direct sunlight or in hot conditions, the drying rate of Emer-Clad will be very fast. If possible, avoid applying Emer-Clad at the hottest part of the day, or work in pairs to ensure that the fabric application follows immediately behind the 1st wet layer to ensure that the 2nd layer is applied 'wet on wet'.

Do not attempt to add water to Emer-Clad in order to extend the working life of the product. This will only lead to a reduction in film thickness and the creation of micro foam.

Allow the fabric reinforced layer to dry overnight before applying at least 2 more coats with a minimum WFT of 350 microns per coat. Allow 2-4 hours drying time between each coat. When applied with reinforcing, the total system must achieve a minimum DFT (dry film thickness) of 500 microns.

Once all coats have been applied, allow the membrane to dry for a minimum of 7 days before application of cement based screeds or other finishes. Longer drying times may be required in cold or humid climates.

Do not apply Emer-Clad outdoors if there is any likelihood of rain within 6 hours after the completion of that days application.

CLEANING

Tools and equipment should be cleaned with water immediately after use.

LIMITATIONS

Do not apply to uncured concrete or while rain threatens, or at temperatures below or which may fall below 10°C. Emer-Clad is not recommended for surfaces subjected to hydrostatic pressure.

Emer-Clad is not suitable for traffic areas subject to heavy foot or vehicle (Emer-Proof 950 should be considered for these applications). Emer-Clad must not be applied over substrates having a high moisture content. Light colours are preferred in deck applications as dark colours absorb too much heat and increase the risk of blistering due to trapped moisture.

Emer-Clad must not be used in applications where it will be

immersed in water for extended periods. Unsuitable applications include, water tanks, planter boxes, roof gardens, fountains, fish ponds and areas subject to long term water ponding.

Emer-Clad should not be tiled over unless allowed to dry for 7 days. For applications where a faster turn around is required, Emer-Proof 750 or Emer-Proof 680 should be considered. Consult your local Parchem office for more information.

ESTIMATING

The coverage figures are theoretical – due to wastage factors and the variety in nature of possible substrates, practical coverage figures may vary accordingly.

SUPPLY

Emer-Clad:	4 and 15 litre pail
Emer-Aquashield:	2, 4 and 20 litre pails
Emer-Coat Clear Sealer:	1, 4 and 20 litre pails
Emer-Patch Smooth:	15 litre pail

COVERAGE

Emer-Clad:	3 m ² /litre/coat
Emer-Aquashield:	6 m ² /litre/coat
Emer-Coat Clear Sealer:	7 m ² /litre/coat
Emer-Patch Smooth:	5 m ² @ 3 mm thick / 15 litre

The coverage figures are theoretical due to variable wastage factors including the variety and nature of possible substrates, hence practical coverage figures may vary accordingly.

STORAGE

SHELF LIFE

All products have a shelf life of 12 months if kept in a dry, cool storage area.

STORAGE CONDITIONS

Store in dry conditions at temperatures between 5°C and 30°C in the original, unopened containers. If stored at high temperatures, the shelf life may be reduced.

ADDITIONAL INFORMATION

Parchem provides a wide range of complementary products which include:

- concrete repair – cementitious and epoxy
- grouts and anchors – cementitious and epoxy
- waterproofing membranes – liquid applied, cementitious and bituminous sheet membranes
- waterstops – pvc and swellable
- joint sealants – building, civil and chemical resistant
- industrial flooring systems – cementitious and epoxy
- architectural coatings
- filler boards – swellable cork, bituminous and backing rod
- ancillary products

For further information on any of the above, please consult with your local Parchem sales office.

IMPORTANT NOTICE

A Material Safety Data Sheet (MSDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the MSDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

PRODUCT DISCLAIMER

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.