

A ONE COMPONENT LIQUID, 100% ACRYLIC ELASTOMERIC WATERPROOFING MEMBRANE

DESCRIPTION

The **Elastoclad system** comprises a single component water based, high solids, 100% acrylic copolymer waterproof membrane coating applied over a range of primers dependent on the substrate type. **Elastoclad** is a crack-accommodating coating containing additives to inhibit the growth of mould and resist bacterial growth and resists aggressive elements.

USES & ADVANTAGES

Use as a decorative, waterproofing membrane to most types of building facades, walls, roofs and gutters after the recommended primer/sealer application. **Elastoclad** has approval for the safe encapsulation of asbestos and for use in "wet areas" such as bathrooms. It provides a protective waterproofing skin over polyurethane foam, protecting the PU foam from UV and weather attack. On roofs and balconies, **Elastoclad** provides a durable, non skid, waterproof finish which will accept regular foot traffic. When applied as a multi-layer system incorporating reinforcement fabric, **Elastoclad** is also suitable for waterproofing concrete decks subject to light vehicular traffic. **Elastoclad** is suitable for application to many common substrates including concrete, fibrous cement products, metals, timber and bituminous membranes. Some special priming may be required.

Advantages include:

- Proven track record over 30 years.
- Safe to use, water based acrylic formulation.
- Easy water clean up.
- One component - readily applied direct from pail.
- Excellent resistance to UV, weathering and CO₂.
- Excellent build properties enable application to both horizontal and vertical surfaces. Lightweight no topping required.
- Can be applied to a wide range of substrates.
- Various colours available. Colour fast.
- Highly flexible - accommodates movement and minor cracking of substrates.
- No solvents or fire hazard. No pungent smell.
- Acoustic dampening properties.
- Excellent long term durability.
- Fast application.
- High solids & resin content.
- Remains flexible through use of high grade 100% elastomer acrylic polymers.
- Low maintenance costs.
- Reduced energy cost due to heat reflectivity.
- Resistant to foot traffic.
- Excellent dirt releasing ability.
- No need to remove existing system in maintenance situation e.g. existing sheet membrane, therefore reduces programme time, noise, dirt, debris etc.

PROPERTIES

Colour:	4 standard colours plus special colours made to order.
Volume solids:	45% (ASTM D2697)
Specific Gravity:	Approx. 1.26
Physical or Chemical	
Change:	Dries through loss of water.
Drying Tack free:	40 minutes (30°C, 50% RH)
Recoat:	2 hours
Fully dried:	7 days
Application temp:	5 - 40°C
Hardness:	55-65 shore A (ASTM D2240)
Elongation:	400% ±30 at 24°C (ASTM D412)
Permeance:	1.95 metric perm @ 500 microns (ASTM E96)
Bond Strength:	Exceeds cohesive strength of coating (ASTM C297)
UV Resistance:	No effect after 5,000 hours (ASTM D822)
Tear Resistance:	>21 kN/mm (ASTM D624)
Accelerated Weathering:	No cracking (ASTM D471)
Carbon dioxide diffusion resistance:	
(Klopfer criterion R >50 m - R	= 266 m
Water vapour diffusion resistance:	
(Klopfer criterion SD <4 m) - SD	= 1.65 m
Water permeability:	Highest resistance to water penetration
(Class E ASTM E514-7A)	
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.	



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Effective noise rise reduction: 2 - 701dB

Acoustic dampening properties: 500 micron sample of **Elastoclad** on Lysaght "Custom Orb" 26 gauge thickness corrugated steel sheet.

Chemical resistance: Unaffected by a range of mild acids, alkalis, and is resistant to bio-deterioration. Cormix International should be consulted in respect of other chemicals.

Heat Reflectance

White Elastoclad offers 80% reflection of solar energy providing the following advantages:-

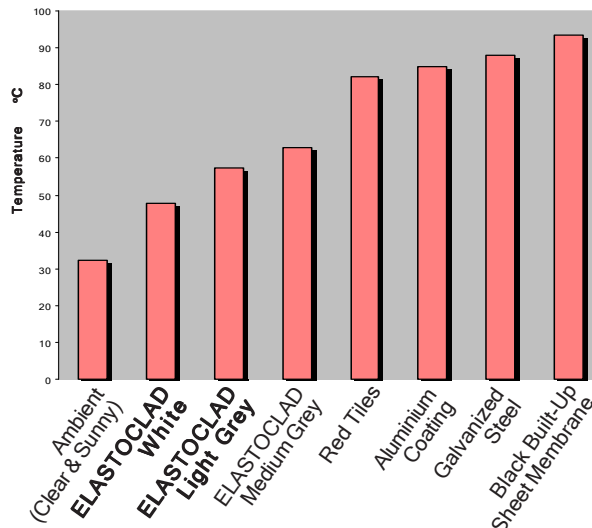
- Minimises surface temperature gain.
- Prevents roof degradation of existing substrate.
- Minimises expansion/contraction experienced with temperature changes extending the life of the roofing system.
- Decreases energy consumption.

Heat Reflectivity of Roof Materials:

Material	Solar Reflectance	Temperature of Roof Over Air Temp.(°F)
Bright white coating (ceramic/elastomeric) on smooth surface	80%	15°
White membrane	70-80%	15°-25°
White metal	60-70%	25°-36°
Bright white coating (ceramic/elastomeric) on rough surface	60%	36°
Bright aluminum coating	55%	51°
Premium white shingle	35%	60°
Generic white shingle	25%	70°
Light brown/grey shingle	20%	75°
Dark red tile	18-33%	62°-77°
Dark shingle	8-19%	76°-87°
Black shingle or materials (Sheet membranes)	5%	90°

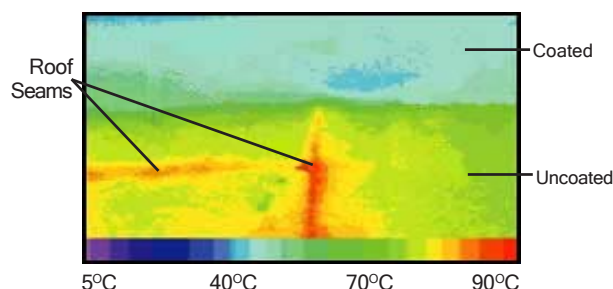
Source: Oak Ridge National Laboratory, Lawrence Berkeley National Laboratory, and the Florida Solar Energy Center.

Solar Energy Effect on Coloured Roof Substrates



Elastoclad shows a significant heat reflectivity compared to other roofing materials.

Infra red Photograph of a Roof at the Edge of White Coating on Light Grey Sheet Roof



Roof Surface Temperature Reduced from 90°C to <70°C

* Properties are typical under laboratory conditions and do not constitute a specification. Field trials are recommended.

APPLICATION INSTRUCTIONS

Due to the wide range of applications for which **Elastoclad** is suitable, several system brochures have been produced to explain specific surface preparation and application details for each type of application. These system brochures are available from Cormix International Ltd.

System 1: General facade waterproofing including: walls, brick, masonry render, block work and concrete.

System 2: Waterproofing and refurbishment of corrugated roof materials including: fibrous cement, steel and aluminium.

System 3: Waterproofing of concrete roofs, masonry tiles and concrete decks.

System 4: Waterproofing of wet areas including: showers, laundries and bathroom floors.

Cormix will provide application advice for maintenance when applying **Elastoclad** over existing systems such as sheet membranes, or built up roofs.

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SURFACE PREPARATION & PRIMING

Surfaces shall be sound, clean, dry and free from oil or grease. Moisture shall not be escaping from the substrate. If moisture is escaping seal with 2 coats of **Contite Moisture Barrier**.

Concrete & masonry surfaces

Contite Moisture Barrier, Elastoclad Clear Sealer.

Steel, aluminium, galvanised steel & zinc

Elastoclad Primer 2

Bituminous or asphalt surfaces

Consult Cormix.

Timber

Elastoclad Acrylic Sealer.

Previously coated substrates

Elastoclad Clear Sealer

Sound, previously coated or primed surfaces

The old surface should be thoroughly scrubbed with detergent and water, then sanded or wire brushed to ensure mechanical adhesion. Seal with **Elasto Coat Clear Sealer**.

Crumbling walls

The application of **Elastoclad** will prevent the erosion of weak, crumbling walls and will readily bridge hairline cracks.

Overcoating old Elastoclad

Clean the surface, then apply a single coat of **Elasto Coat Clear Sealer** and allow to dry for one to two hours.

Expanded plastics, polystyrene and polyurethane foam etc.

Apply 2 coats of Elastoclad directly over clean surfaces.

The treatment of joints liable to movement

These must be bridged with **Elastocloth** reinforcement. The reinforcement should be laid and stippled flat on a very thin coat of wet **Elastoclad** and allowed to dry. It should then be covered with a thin layer of **Elastoclad** with a generous overlay on each side of the mesh and allowed to dry. This followed by a minimum of 2 coats of **Elastoclad** over the entire surface.

Mould infested surfaces

Scrape or clean thoroughly; all finishes lifting or badly infested should be removed. Wash down with a water soluble fungicide or one part of domestic bleach to eight parts of water and then rinse off residues. Make good any defects and allow walls and repairs to completely dry.

Notes : All sealer/primer applications to be allowed to dry prior to the application of the first coat of **Elastoclad**.

APPLICATION

Prior to applying **Elastoclad** to the roof surface all detailing work must be completed on seams, splits, protrusions, fixings, drains, flashings, fasteners etc. The detailing shall be completed using **Conflex LM** or **Elastocloth** reinforcement embedded in **Elastoclad**. Primers shall have been applied and dried. **Elastoclad** shall be extended up & over pipes, parapets, vents & fixings to finish at least 10 cm. above the substrate. The coating should be extended under flashings.

Coats of **Elastoclad** shall be installed in a direction perpendicular to the last one except if coating metal roof panels.

Surfaces shall be uniformly coated & free from voids, blisters or pin holes. Before recoating previous coats must have adequately cured. Several hours are required to achieve resistance to rain or dew. Long term resistance will take longer depending on weather conditions, resistance to ponding shall require 24-48 hours.

All dirt, dust or pollution that falls on the coating between coats shall be removed before applying the next coat. Film thickness may be checked with a wet film gauge.

In high temperatures **Elastoclad** in opened containers may skin over, remove the skin before mixing. To prevent skinning cover the container with plastic.

Diluting **Elastoclad** with water is not recommended as its properties will be effected. Do not leave **Elastoclad** in equipment, purge with water. Spraying material with temperatures below 15°C will become more difficult due to its cohesive nature.

Spraying by airless spray is preferred over flat surfaces, a heavy to medium nap roller can be used and brush or roller for touch up or detail work.



Application of Elastoclad by Spray

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The application using brush or roller requires laying the material onto the surface, avoiding brushing out, to achieve the required film thickness per coat. A minimum of two coats are required on vertical surfaces to achieve a total dry film thickness of approximately 350 microns. On horizontal surfaces a minimum of three coats are required to achieve a total d.f.t. of approximately 500 microns.



Application of Elastoclad by Roller

REINFORCEMENT & ROOF DECKS

Polyester fabric or mesh can be incorporated into the **Elastoclad** film to reinforce the membrane. Reinforcement is recommended for various applications, cracked concrete decks, old sheeted and bitumen membranes and trafficable areas. Once the reinforcement is embedded into the **Elastoclad** and dry, apply a minimum of 500 microns D.F.T. of **Elastoclad** over these areas.

On roof decks, balconies etc., **Elastoclad** is reinforced with polyester fabric or mesh embedded into the first coat of **Elastoclad** whilst wet. Apply a further coat ensuring there are no bubbles or wrinkles in the reinforcement to completely saturate the reinforcement. Application of this reinforcing will require the use of approximately 0.5 litre **Elastoclad**, additional to the final membrane materials per m² of area. Apply an additional three (3) coats of **Elastoclad** to achieve a total d.f.t. of approximately 1000 microns (1 mm).

The product will be touch dry in approximately 40 minutes and may be overcoated after 2 hours drying under normal conditions. This can be assessed at the time of application and is influenced by ambient temperature, humidity, airflow and type of surface treated.



GENERAL INFORMATION

Fabric Reinforcement

Fabric reinforcement is required on roofs that have a large amount of cracks, splits, seams, joints etc. These may be individually addressed using **Conflex LM** and **Elastocloth** if the numbers are limited.

Ponding

Ponding should be avoided on roofs, and good slopes to drains provided, however, **Elastoclad** withstands minor ponding found on many roofs.

Product Life

The life of **Elastoclad** depends on initial applied thickness, UV levels, temperatures, abrasion, foot traffic, rain, ponding & wind. **Elastoclad** will typically wear at a low rate of 10-15 microns per year.

The thickness of **Elastoclad** is related to the required life and anticipated crack widths. The thicker the coating the longer the life and greater the crack bridging capacity. Typically the coating is installed to last 5-10 years before recoating. It is recommended that the base coat shall be light grey before applying the white top coat as the top coat wears the base coat will eventually show through.

Recoating

Before recoating **Elastoclad** shall be cleaned with water & detergent, high pressure washed off & all necessary repairs made.

Old Systems

Elastoclad can be applied over built up & modified bitumen roofs, cracked and deteriorated concrete roofs, steel roofs and single ply membranes such as EPDM, Hypalon, PVC, Neoprene etc. Ensure moisture movement is sealed off.



Elastoclad applied over existing roof membrane system.

CLEANING

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

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APPROXIMATE COVERAGE RATES

Elastoclad	2.8 m ² /litre per coat*
Elasto Coat Clear Sealer:	7 m ² /litre per coat
Contite Moisture Barrier:	3 m ² /litre per coat
Elastoclad Acrylic Sealer:	12 m ² /litre per coat

The coverage figures are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures may be substantially reduced. For profiled steel roofs multiplication factors of 1.2-1.3 are normally required.

* 150 microns dry film thickness.

MAINTENANCE

There are no special requirements for maintenance, any damage identified during normal inspections should be repaired or material replaced as appropriate. Regular maintenance should be carried out & the roof cleaned at least once a year to prevent build up of dirt, leaves, chemicals, bird dropping & other contaminations that may adversely effect the coating.

SPECIFICATION CLAUSES

Waterproofing membrane for concrete roof slabs and deckings.

Prior to applying **Elastoclad** on flat concrete roof slabs and decking areas initially prepare and prime the substrate in accordance with manufacturer's surface preparation details.

Over the prepared area, apply one coat of **Elastoclad** and while still wet embed polyester reinforced fabric or mesh overlapping edges and ends by a minimum of 50 mm. Ensure that all bubbles and wrinkles in the reinforcement are removed prior to further overcoating.

Apply multiple coats of **Elastoclad** (min. 3 coats) to provide an additional dry film thickness of approximately 500 microns over the reinforced area. Allow between 2 and 4 hours between coats. Application shall be by airless spray or roller.

Note : the total thickness of the system should be approx. 1 mm. requiring at least 1.5 litre of **Elastoclad**/m² over the reinforced completed system.



Decorative waterproofing facade coating.

The decorative waterproofing coating shall comprise a suitable primer system overcoated with **Elastoclad**, a single component elastomeric coating suitable for application by brush, roller or spray. The total dry film thickness of the coating shall be not less than 350 microns and shall be capable of providing carbon dioxide diffusion resistance equivalent to not less than 50 metres of air. It must exhibit a water vapour transmission resistance S D not more than 1.65 metres (Klopfer criterion) and achieve a Class E water permeability when tested to ASTM E514-74.



Waterproofing membrane system for bathroom and wet areas.

Prior to applying **Elastoclad** in wet areas prepare and prime the substrate in accordance with manufacturer's surface preparation details.

Once this has been completed, a fillet of **Conflex LM** polyurethane joint sealant should be applied at the junction of the wall and floor (perimeter seal). A base coat of **Elastoclad** should be layed and a layer of polyester reinforcing fabric or mesh placed over all joints and where the walls and floor meet. Where subject to flooding reinforcement should be used over the entire area. Apply multiple coats of **Elastoclad** to achieve a dry film thickness of at least 500 microns.

LIMITATIONS

Elastoclad should be applied to sound substrates either new or old. Unsound surfaces must be repaired or removed. Cracks must be detailed. **Elastoclad** should not be applied over surfaces containing moisture, insulation that is saturated should be replaced. Existing waterproofing systems left in place must be sealed to avoid moisture movement. To avoid potential bubbling of the system concrete containing moisture should be treated

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with 2 coats of **Contite Moisture Barrier** to a minimum d.f.t. of 300 microns. The concrete's moisture content should be < 4%.

All detailing must be attended to prior to the application of **Elastoclad**, it is not designed to bridge expansion joints, and will only crack bridge if applied at the correct coverage rates to accommodate the crack size. **Elastoclad** is not manufactured to seal structural cracks. Reinforce when subject to light traffic.

Extreme ambient or surface heat temperatures will have a detrimental effect on **Elastoclad** during installation.

Under high temperatures work should be performed early in the morning, late in the day or in shaded sections. Application under direct sunlight during the heat of the day should be avoided.

Do not use as a vapour barrier coating or over cold storage tanks. Do not apply to uncured concrete or while rain threatens, or at temperatures below or which may fall below 10°C during the drying period. **Elastoclad** is not recommended for surfaces subjected to hydrostatic pressure. Protect from rainfall whilst curing.

Elastoclad should only be tiled over after drying for 7 days. For applications where faster turn around is required, consult Cormix International Limited.

WARRANTIES

Elastoclad warranties are available for five, ten or fifteen year periods. The warranties guarantee the performance of the material against leaks caused by normal weathering. Refer to the individual warranty documents for additional information.

PACKAGING

Elastoclad Acrylic Sealer: 20 litre pails
Elasto Coat Clear Sealer: 20 litre pails
Elastoclad Primer 2: 20 litre pails
Contite Moisture Barrier: 20 litre pails

STORAGE & SHELF LIFE

All products have a shelf life of 12 months if kept in a dry store.

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.

Fire:

Elastoclad Clear Sealer is flammable. Keep away from sources of ignition. No smoking. In the event of fire, extinguish with CO₂ or foam. Do not use a water jet.

HEALTH & SAFETY

Elastoclad Primer 2 is acidic and appropriate eye and skin protection must be taken to avoid contact.

Elastoclad is non-flammable and is classified as non-hazardous, however, all manufactured products should be handled with care. If swallowed, do NOT induce vomiting, give a glass of water. If in eyes, hold eyes open, flush with water for at least 15 minutes. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. Do not use solvents on skin. If poisoning occurs, contact a doctor or Poisons Information Centre.

TECHNICAL SERVICE

Cormix International Limited 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. The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001 : 2008 verified by TUV Nord.

CONTACT DETAILS

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