

RESIDENTIAL
& COMMERCIAL

INDUSTRIAL
& MARINE

ART
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SHIMICOAT
SURFACE SOLUTIONS



Laminating Clear Epoxy

Kit Sizes

Kit Sizes (Vol)	Mix Ratios
750mL	2A:1B (0.5Lt A + 0.25Lt B)
1.5L	2A:1B (1Lt A + 0.5Lt B)
3L	2A:1B (2Lt A + 1Lt B)
6L	2A:1B (4Lt A + 2Lt B)
15L	2A:1B (10Lt A + 5Lt B)
30L	2A:1B (20Lt A + 10Lt B)

Description

Laminating Clear Epoxy LC160 is an industrial grade epoxy coating material for high performance and functional surfaces. The product has various applications due to its excellent mechanical, chemical, electrical and adhesion properties to most substrates such as concrete, timber, aluminum, etc.

Two components (A & B) comes in clear 100% solid epoxy used as clear topcoat with chemical resistance and durability with excellent clarity upon cure, ideally engineered for Fibreglass Laminating and clear casting materials. Laminating Clear Epoxy LC160 is a high-quality solvent-less, odorless two component coating system for concrete surfaces such as driveways, pathways, workshops and warehouses providing a tough clear film, high gloss and wet look to protect surface from stains, spills and wear. Laminating Clear Epoxy LC160 has been developed specifically for Australian conditions using the latest epoxy technology. It provides excellent protection against weathering conditions and the splash and spillage of a wide range of chemicals. Laminating Clear Epoxy LC160 provides a highly durable, chalk resistant, wear and chemical resistance surface for concrete, wood and metal surfaces. High quality topcoat epoxy surface coating system that is solvent free when used as a clear un-pigmented coating or binder. The product can be tinted in all Australian Standard Colours. This coating has specially developed to be incorporated with non-slip materials and a large number of decorative materials to provide a floor finishing system, with functionality and style. The surface may be laid as a thin film using roller applicator. The thickness of the coating can be reduced by addition of Diluent. Aggregates may be added to the blend to create a non-slip flooring finish. Clear Marine Epoxy may show yellowing effect if exposed to UV radiation of sunlight. The product is engineered for undercover surfaces. Modern, hygienic, functional and economical surface.



MATERIALS



CHEMICALS



RESINS



EQUIPMENT

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Features

Laminating Clear Epoxy LC160 is supplied in two pack kit, Part A (Resin) and Part B (Curative or Hardener). Other parts such as pigment, flakes, decorative and non-slip materials can be supplied separately. Selected features of Laminating Clear Epoxy LC160:

- Modern, Hygiene, Functional and Economical.
- Heavy duty clear or pigmented coating for concrete and polished concrete floors.
- Highly resistant to chemical attack and pedestrian or vehicular traffic.
- Can be used in conjunction with graded aggregates to produce durable decorative floor finishes.
- Long lasting and easily maintained with good resistance to a wide range of domestic and commercial chemicals.
- Solvent free when used as a clear un-pigmented coating or binder.
- Outstanding water resistance.
- Seamless, easy to clean and maintain.
- Suitable for Flake Flooring systems, see SHIMI FLAKE flooring system.
- Superior Chemical Resistant Finished surface
- Solvent Free (Unless you apply Diluent for thickness control)
- Engineered formulation for trafficable area with high mechanical strength
- DIY Friendly, easy to apply and curable over a wide range of temperature
- Available with a wide range of Flakes for decorative concrete
- Ideally compatible for Non-Slip Flooring System.

Coverage

1L covers approximately 5sqm per coat, depend on the conditions of the surface.

First coat usually consumes more and the second coat less.

For PouOn application, 1L/sqm is recommended to achieve 1000micron thickness.

Applications

Roller, Brush or Squeegee.

Strong bonding to most substrates such as Concrete, Timber, Aluminum, etc.

Dry Time at 25°C

Pot Life:	45 minutes at 25°C
Tack Free:	2-3 hours
Thin Film Set:	8 Hours (Min, depending on temperature and humidity)
Deep Cast Set:	24 Hours (Min, depending on temperature and humidity) 10mm Max
Dry Cured:	12-16 hours – Foot Traffic (depending on temperature and humidity)
Fully Cured:	7 days (Vehicle Traffic)
Re-Coat:	Over night

Clean Up

Thinner & Diluent (Blend of Solvents).

Preparations

Clean and dry surface. Ensure surface to be coated is free of all dirt, grease, oil, paint, curing agents and other contaminants. Removal of Oil Contamination by degreaser and alkaline cleaning pressure wash.

Acid-wash to enhance surface porosity and etch the surface.

Ensure moisture free surface. Allow to completely dry, run Dry Test. Place a piece of plastic over a small area, tape the edges and leave for 1 hour. Remove plastic, if there is no moisture on either surface, concrete is sufficiently dry. Ideally, always consider surface grinding and removal of loose materials. Grinding is always advisable prior to application of all Shimicoat Epoxy products, to maximize adhesion. For further information, please refer to SHIMICOAT Instruction for "Surface Preparations".

Specifications

Physical & Chemical properties of Laminating Clear Epoxy LC160:

Mix Ratios	2A:1B (Volume) or 2A:1B (Weight) <i>For Example: 2Lt of A (2Kg) & 1Lt of B (1Kg)</i>
Pot Life @25°C	45min
Colour of Blend	Available in All Australian Standard AS 2700 Colours
Specific Gravity (SG) of Blend	1.4
Low Profile Coverage (Kg/sqm)	Roller Application (200micron) - 0.2Kg of Blend per sqm
Maximum Temperature Surface Exposure (°C)	140
Initial Cure Time (Hours)	24Hours
Ultimate Cure Time (Days)	7 Days
Compressive strength (ASTM D 695-85)	80-90
Tensile strength (ASTM D 638-86)	50
Flexural strength (ASTM D 790-86)	80-90
Hardness shore D (ASTM D2240-86)	81
Abrasion Resistance (ASTM D4060-90)	0.056 g/1000 cycle

Specific resistance properties of Laminating Clear Epoxy LC160, in harsh chemicals.

Media	Reagent	Rating
Acids	Hydrochloric Acid	B
	Sulphuric Acid	C
	Acetic Acid	B
	Nitric Acid (10% max)	C
	Phosphoric Acid (25% max)	B
Alkalis	Sodium Hydroxide	B
	Ammonium Hydroxide	A
	Potassium Hydroxide	B
	Sodium Hypochlorite (Bleach)	A
Solvents	Xylene	A
	Methyl Ethyl Ketone (MEK)	C
	Diesel	A
	Ethanol	A
	Acetone	B
	Kerosene	A
	Petrol	A
	Wine & Beer	A
Code	Resistance	Description
A	Excellent	Suitable for Long term immersion
B	Good	Suitable for Short-term immersion (Max 3 days)
C	Caution	Very short contact time is OK, spill and splash
D	Danger	Not Recommended
Indicative reference only. Tested in laboratory conditions at 25°C.		

Resistance properties of Laminating Clear Epoxy LC160:

Heat Resistant	140°C	Alkalis	Resist Short term immersion in all alkalis.
Weather Proofing	All Epoxy Coatings may yellow with time. Weatherproof top coat may be used if required.	Salts & Brines	Resist continuous or long-term immersion in all Salts & Brine systems.
Solvents	Resistant to most hydrocarbon solvents and alcohols.	Water	Excellent resist to continuous or long-term immersion in fresh & Salt Water.
Acids	Resist splash and spills in all acids.	Abrasion	Excellent when fully cured (7 Days)

Direction

Mixing:

Mix thoroughly for a minimum 3 minutes manual or with mechanical mixer at low speed (750rpm Max).

If mixing smaller portions mix at a ratio of 2A:1B by weight or volume. For example, to prepare 1.5Kg mix, add 500g of Part B (Curative or Hardener) into 1.0Kg (1,000gr) of Part A (Resin). If colour required, add SHIMI COLOURS to the kit and mix again thoroughly.

- Ensure surface to be coated is dry, moisture can cause blooming and delamination.
- Pot life is approximately 45 minutes, work within 30min to ensure easy flow application.
- SHIMI COLOURS, SHIMI METALLIC or SHIMI GLITTERS should be first added to Part A (Resin). Mix slowly using drill mixer on low speed. Mix for a few minutes to ensure completely homogenized without lump. Pour the bend into your tray and apply directly on the surface using the roller.
- Use steady long strokes and avoid overworking the roller or pushing your roller too quickly as this may trap air bubbles in the coating.
- Do not apply if the rain is expected within 24 hours of application.
- Not recommended for use below 10°C or above 35°C.
- New concrete should be allowed to cure fully (at least 20days) before application.
- Keep the pail sealed when not in use. Avoid application on hot surfaces.
- Not Recommended for Directly Under the Sun surfaces as it may yellow.

Fiberglass Laminating Epoxy

Ideal fiberglass laminate can be achieved by consecutive applications of "Tack Coat" to the contact surface, followed by laying the appropriate grade of fiberglass cloth to your desired thickness. Fiberglass rollers can be used to displace air and wetting out the cloth. Successive applications of Laminating Clear Epoxy LC160 and suitable fiberglass cloth applied to desired laminate thickness.

Drying Times

Laminating Clear Epoxy LC160 dries in 8-10 hours. High temperatures and windy

Temp °C	Pot Life (min)	Surface Dry (Hours)	Initial Cure (Hours)	Recoat Time (Hours)	Fully Cured (Days)
10°C	45	12	24	24	7 Days
20°C	40	10	18	18	7 Days
30°C	35	8	16	16	7 Days

conditions may speed the curing time. Keep foot traffic and heavy objects off the final coat for at least 16 hours and vehicles for at least 7 days. Full hardness is achieved after 7 days.

WARNING

- Heavy vehicles with hot tires may cause damage on driveway. Avoid driving over the new coated floors till completely cured (7 Days). For parking the care, place a mat under each tire during the first few weeks to ensure longevity of your new floor.
- Do not apply Ultra Clear EPOXY UC100, if the concrete has a patchy appearance as moisture may be present. Dry Test prior to application.
- Direct sunlight and UV radiation may result in chalking, colour variations and yellowing effect over time. For under direct sunlight, Polyaspartic, Polyurea or Polyurethane coating materials shall be used.

Storage

The products shall be stored out of direct sunlight and heat at all times. The shelf life of the product is 24 months, mix uniformly for 3 minutes prior to use.

DISCLAIMER

Material Safety Data Sheet, Technical and Environmental Data Sheet can be provided upon request.

The information provided in this document is guidance only and considering the uses of this product are beyond the seller's control, the product is sold without guarantees or warranties. Warranties and guarantees shall be governed by SHIMICOAT Standard Terms of Sale. The purchaser shall make its own tests to determine the suitability for their specific application, and Shimicoat Pty Ltd is taking no responsibility for misuse of the product. The purchaser assumes all risk of use and handling of this product. This product will be happily replaced or credited back if defective. Beyond this, Shimicoat Pty Ltd is not liable for any damages caused by this product or its use.

This information and all further technical advice are based on our present knowledge and experience.

The customer is not released from the obligation to conduct careful inspection and testing of supplied goods.