RESIDENTIAL & COMMERCIAL

INDUSTRIAL & MARINE

ART & CRAFT

SHIMICOAT
SURFACE SOLUTIONS

UVthane PLUS

UV Resistant Polyurethane

Description

UVthane PLUS is one of SHIMICOAT's innovative products for topcoat applications over Epoxy, Quartz, Flake, Metallic or direct on concrete or timber surfaces. The product is a high solid and high build Two Pack Polyurethane specifically engineered to achieve a smooth, hardwearing surface for Quartz & Flake flooring, textured concrete, masonry, laminate and timber surfaces. It is an ideal choice for use in areas which require an extremely high build, hard protective coating with high UV resistance properties offering clarity and functionality. It produces a high gloss with excellent weathering properties and abrasion resistance, ideally suitable for both indoor & outdoor surfaces. While the main purpose of SHIMICOAT UVthane PLUS is to be used as clear topcoat, it can also be tinted in all Australian Standard colours for specialized applications.

SHIMICOAT UVthane PLUS has advanced UV resistant properties and formulated to provide protection to concrete, metal and wood surfaces, Fiberglass Reinforced Vinyl Esther and isophthalic resin Plastic surfaces to provide additional resistance to UV degradation of profile surfaces where they may be subject to UV exposure. Notwithstanding, its resistance to UV degradation where long term integrity is desirable.

SHIMICOAT Polyurethane is widely used in marine services where high gloss UV resistant, salt tolerance, hardness and abrasion resistance are required.

Developed by SHIMICOAT R&D department, UVthane PLUS is a high-performance resinous surface coating for industrial manufacturing environments, focusing on important properties required for a topcoat protective application.

As an outstanding protection for your valuable business assets, SHIMICOAT Crystal Clear Polyurethane offers all those properties you may require:

- Can be applied as thin as you wish without any compromise on performance
- Abrasive/scratch resistant when compared to many other surface coating materials
- Chemical resistant to harshest industrial chemicals
- Long lasting as it DOES NOT wear out
- Modern, Hygienic, Economical and Functional
- Ideally suitable for both Indoor and Outdoor areas

For mining, oil & gas industry, agricultural machinery, plant and equipment, marine services or any other application where exceptional durability is crucial, UVthane PLUS as an ultra-tough two-pack polyurethane direct gloss topcoat provides superior performance.

The product retains excellent gloss and colour over a long term, keeping your valuable equipment surfaces and floors looking great while enhancing the image of your business.

Direct-on application and Ideal for most surfaces:

- Grey Concrete
- Exposed Aggregate
- Limestone
- Decorative Concrete
- Epoxy Flake Floors topcoat
- Tiles and all Pavers
- Timber Surfaces
- Metal Surfaces
- Laminate
- Polished Concrete
- Tools and Appliances
- Fiberglass Reinforced Vinyl Esther
- Plastic surfaces
- Indoor & Outdoor

Creating a smooth impervious surface

Features

UVthane PLUS is in two parts A and B that you can open and use as you need and store the rest with shelf life of over 24 months. No matter how often you open the lid, it does not react with atmospheric moisture, so integrity of the product remains intact for its shelf-life, a few selected features of UVthane PLUS are:

- Easy Application:
  - Rolled
  - Brushed
  - Squeegee
- Non-Hazardous – Non-Dangerous Goods technology
- Odoules
- High solid, solvent-free, highly reactive two-component protective coating
- Water Clarity and high transparency
- Impervious finish surface
- Good weather resistance, friction resistance and compression resistance
- Hardwearing finish surface
- Bond well with good permeability into the substrate
- Excellent adhesion to substrates such as concrete, ceramic tiles, wood, metal and even glass surfaces
- Excellent waterproof and anticorrosive properties
- Ideally suitable for waterproofing repairs on concrete and tiles indoor and outdoor
- Ideally suitable for under direct sunlight with extreme UV radiation
- Excellent mark and scuff resistance
- Excellent anti-graffiti coating
- Excellent resistance to oil and most household chemicals
- Excellent chemical resistance
- Excellent resistance to water
- Excellent resistance to alkalis and high pH conditions
- Ideal for Indoor and Outdoor
- Ready-to-use formulation without any need for dilution
- Advanced polymer technology to penetrate deep with high build properties
- Protect against waterborne contaminates
- Protect against salt ion ingress
- Protect against efflorescence, biological growth
- Produces a hard, crystal clear film
- Excellent resistance to weathering
- Long lasting and Durable
- Excellent adhesion
- Tintable in all Australian Standard Colours
- Forms a hard-wearing surface
- Very durable coating
- Good dry and through cure Easily Recoated
- Compatible with decorative and slip resistant coating materials
- Ideally suitable for both Indoor & Outdoor
- Economical

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Pack Size

Larger kit sizes are available for special orders.

NO	Kit Size (Lt)	Mix Ratios
1	1.15Lt	3.6A:1B (0.9Lt A + 0.25Lt B)
2	2.3Lt	3.6A:1B (1.8Lt A + 0.5Lt B)
3	4.6Lt	3.6A:1B (3.6Lt A + 1Lt B)
4	7Lt	3.6A:1B (5.5Lt A + 1.5Lt B)
5	15Lt	3.6A:1B (11.8Lt A + 3.2Lt B)
6	23Lt	3.6A:1B (18Lt A + 5Lt B)

Colour Chart

Crystal Clear Liquid A / Crystal Clear Liquid B

Coverage

5-10sqm/Lt Per Coat / Recommended Two Coats

Applications

Roller, Brush or Squeegee
Both Penetrating and High Build Sealer
Ideal for Topcoat Outdoor Applications

Dry Time at 25°C

Touch Dry: 16 Hours (Depending on temperature, air flow and humidity)
Recoat: Over Night (Min 16 Hours at 25°C)
Foot Traffic: 16 Hours
Heavy Traffic: 48 Hours

Clean Up

Clean-Up with Xylene, EpoDil or AcryDil

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 enhanced 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”.

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Specifications

Physical Properties:

Mix Ratios	3.6A:1B (Volume) or 4A:1B (Weight) *For Example: 3.6Lt of A (4Kg) & 1Lt of B (1Kg)*
Appearance	Twin Pack Crystal Clear Low Viscosity liquid
Solid Content (%)	>90% Polyurethane Polymer
Relative Density (Water=1.00)	1.1
Pot Life (Min)	45min
Thinning, Dilution Chemicals	Xylene, EpoDil or AcryDil – Up to 10% Vol
Solubility	Miscible in Water – Soluble in Hydrocarbon Xylene
Application Conditions (Temp °C)	10 – 30 °C
Coverage Rate	5-10 sqm/L/Coat, Needs Two Coats

Epoxy *vs* Polyurethane

SHIMICOAT is the manufacturer and supplier of a wide range of Epoxy products for various applications and different desired performance results. Epoxies most important desirable properties:

- ***Super strong bonding to a well-prepared concrete surface***, creating a well-adhered system base that will allow subsequent build and topcoats. A complete coating system is only as good as its initial bond to the concrete substrate.
- ***High Build Up/ High Thickness epoxy application of 10mm or more***, ideal for basecoat. High Build Up/ High Thickness epoxy application of 10mm or more by self-levelling allows the coating to chemically bond to the epoxy primer, and is thick enough to your desire to self-level and fill minor concrete blemishes and hairline cracks. Depending on the desired performance requirements and condition of the concrete, more build coat applications may be installed by PourOn method. Upon curing, the epoxy build-coats provide a hard, durable surface.
- ***Easy Installation & High Performance upon curing***, the epoxy coats provide a hard, durable surface with good impact resistance
- ***Resilient, impact resistant, somewhat flexible and hard:*** Ideal for high traffic floor,
- ***Cost Effective*** when compared to many other industrial flooring solutions

The two major drawbacks with Epoxy products are:

- Sensitive to UV radiation of sunlight and they tend to amber or yellow over time, so non suitable for outside applications, under direct sun or UV radiation
- Epoxies are not as abrasion and chemical-resistant as polyurethanes, they are more susceptible to scratch and marks

Polyurethane, Polyurea or Polyaspartic is relatively new coating and becoming the latest favorite for installers as an alternative to epoxy for topcoat applications. SHIMICOAT offers UVthane PLUS as a Crystal-Clear Topcoat with UV resistant properties and ideally suitable for outdoor application surfaces. UVthane PLUS is a coating system to protect your floors from stains, chemicals, wear and tear, oils, and damage and UV radiation.

Coating	Pros	Cons
Epoxy	▪ Epoxy coatings can be applied in various degrees of thickness. ▪ Epoxy bonds extremely well to well-prepared concrete surface. ▪ Perfect as basecoat and old concrete resurfacing. ▪ Epoxy can be applied as thick as you wish. ▪ Ideally suitable for high impact and heavy machineries.	Epoxy yellow when exposed to sunlight UV radiation.
Polyurethane UVthane OR UVthane PLUS	▪ Polyurethane is more flexible than Epoxy. ▪ Polyurethane has better abrasion resistant properties. ▪ Polyurethane is an ideal choice for topcoat applications. ▪ UVthane PLUS is UV stable, ideal for Outdoors	More expensive than Epoxy

What's the Best Choice?

Epoxy as basecoat and Polyurethane as topcoat. This flooring system provide you with ideal Epoxy foundation with strong bonding ability to substrate and Ultra Clear Polyurethane (UVthane) topcoat which is highly chemical resistant and UV radiation tolerant.

SHIMICOAT recommend Epoxy applications for basecoat and those areas out of direct sunlight and UVthane PLUS for all topcoat applications.

Direction

SHIMICOAT Polyurethane can be applied directly on surface or over other epoxy and decorative materials such as Quartz, Flakes or Glitters.

SHIMI Quartz:

Remove excessive Quartz, cleanup, vacuum, broom or blow out loose Quartz. Ensure the floor has been uniformly prepared and all lose materials vacuumed or removed from the surface.

Apply using a suitable roller or spread with a squeegee then level by back-rolling in both Criss-Cross directions.

One coat of SHIMICOAT Crystal Clear Polyurethane (UVthane or UVthane PLUS) is enough for topcoat and two coats are ideal.

The second coat must be applied within 16 hours of the 1st coat being applied. Sanding may be required, if there is a between-coat interval gap of over 72hours.

Flake Flooring:

Ensure flaked floor has been uniformly scraped and all lose flakes vacuumed or removed from the surface.

Apply using a suitable roller or spread with a squeegee then level by back-rolling in both Criss-Cross directions.

One coat of SHIMICOAT Crystal Clear Polyurethane (UVthane or UVthane PLUS) is enough for topcoat and two coats are ideal. The second coat must be applied within 16 hours of the 1st coat being applied. Sanding may be required, if there is a between-coat interval gap of over 72hours.

Direct on Concrete:

Over new concrete, ensure concrete is sufficiently cured (recommended minimum 28 days), with moisture content of less than 5%. Skim grinding of the surface may be required to remove surface materials such as concrete sealer, paint, algae, mildew, mould, oil, grease and loosely bonded concrete. If grinding is unavailable, we recommend acid wash followed by pressure cleaning. Allow to thoroughly dry before coating.

Please refer to the following SHIMICOAT Procedures for further details:

- Surface Preparation Procedure
- Concrete Moisture Test
- Concrete Acid Wash

Application:

- Calculate coverage rate of 5-7m² per litre depending on film build.
- Pot Life of the product is 45 minutes depending on the temperature, get it out of the mixing bucket and *on the floor* within 10min or less, to cool it down.
- Blend enough quantity that you can comfortably apply within your time-frame, not too much, not too little. We recommend 2.5Lt (one person) or 5Lt Max for two people mix at a time, and applying.
- By weight, Add 1 part of Part A into 4 parts of Part B.
- By volume, Add 1 part of Part A into 3.6 parts of Part B.
- Mix with slow RPM mixer or stick for 2-3 minutes gently and uniformly, in both directions. DO NOT introduce air into the product, avoid aggressive mixing.
- Use Neat. Only if necessary, dilute by adding up to 5% AcryDil, EpoDil or Xylene into the mix to make it easier to roll out and apply to the surface. Example of such situation is, during winter when temperature is closer to 10°C and resin is viscous or if you wish to thin it down during first application and allowing deeper penetration.
- Mix well and commence application using brush, roller or squeegee.

Warning:

- Please consult MSDS of the product prior to use.
- Do Not Apply if rain is expected within 24 hours, when applying outdoor
- Surface Prep is crucial to ensure strong bonding. Surfaces such as Porcelain Tiles, Polished or Burnished Concrete are not suitable for coating due to lack of surface porosity.
- Sealed surfaces can become slippery when wet.
- DO NOT apply over existing low-quality sealers or coating materials
- USE only UVthane PLUS over driveway or pool surroundings with extreme UV radiation
  SHIMICOAT has a wide range of sealers for outdoor surfaces, driveway and under direct sun surfaces:
  - UVthane PLUS,
  - *Acrylic Sealers,*
  - *AQUAthane and AQUA SEAL*
- Main three reasons detrimental to curing process of SHIMICOAT Crystal Clear UVRes Polyurethane:
  - Not mixed properly, mix for a minimum of 2 minutes using low speed electric mixer or paint mixer
  - Wet substrate with moisture content over 5%
  - Too Cold: Low atmospheric temperature, lower than 10 °C

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.