

OIL BASED VS. WATER BASED POLYURETHANE

SHIMICOAT offers Polyurethane in both water based and solvent/oil-based version:

1. AQUAthane (Single Pack)
2. UVthane (Dual Pack)

Both products can be used in both indoor and outdoor surfaces. Both are UV resistant and hardwearing. However, UVthane is much more resilient and hardwearing compared to AQUAthane. We recommend UVthane if water based is not a requirement.

AQUAthane:

An Ultra Clear water based Semi-Gloss finish Polyurethane, single component sealer, designed to protect and enhance concrete surfaces internally and externally. SHIMICOAT AQUAthane is an advanced formulation, cross linking emulsion with strong bonding to well-prepared concrete surfaces. The product can be used over existing solvent based acrylic coatings to freshen up your concrete surface. AQUAthane is an odorless, Green Star compliant (VOC free) sealer.

A ready-to-use water-based Polyurethane clear topcoat with excellent adhesion for added scratch and mar resistance with excellent moisture barrier properties. The product is engineered for superior toughness, durability, water resistance, and is excellent for applications where hardness and longevity are required. AQUAthane is an environmentally benign, non-flammable, fast drying, low odor alternative to solvent-based lacquers.

The product can be applied to most surfaces such as:

- Driveways
- Garage & Warehouse Floors
- Cafés and restaurants
- Alfresco & Patio

UVthane

One of SHIMICOAT's innovative products for topcoat applications over Epoxy, Flake, Metallic or direct on concrete or timber surfaces. The product is a high solid, Non-yellowing high build Two Pack Polyurethane specifically engineered to achieve a smooth, hardwearing surface for 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 excellent UV resistance offering clarity and functionality. It produces a high gloss with excellent weathering properties and abrasion resistance. While the main purpose of SHIMICOAT UVthane Clear is to be used as clear topcoat, it can also be tinted in all Australian Standard colours for specialized applications.

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 Clear 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 thick as you wish without overheating problem (High Build Clear Resin)
- UV Resistant, so can be applied outdoor under direct sun and UV radiation
- Abrasive/scratch resistant when compared to MANY other surface coating materials
- Chemical resistant to harshest chemicals available in household
- Long lasting as it DOES NOT wear out
- Modern, Hygienic, Economical and Functional.

For mining, oil & gas industry, agricultural machinery, plant and equipment, marine services or any other application where exceptional durability is crucial, this 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:

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|------------------------------|--|
| ▪ Grey Concrete | ▪ Metal Surfaces |
| ▪ Exposed Aggregate | ▪ Laminate |
| ▪ Limestone | ▪ Polished Concrete |
| ▪ Decorative Concrete | ▪ Tools and Appliances |
| ▪ Epoxy Flake Floors topcoat | ▪ Indoor and Outdoor |
| ▪ Tiles and all Pavers | ▪ Creating a smooth impervious surface |
| ▪ Timber Surfaces | |

What is the difference between water based and oil-based Polyurethane?

Both oil and water-based Polyurethanes are for concrete surface protection in many ways as specified on product specifications. Either of Polyurethane is a sacrificial layer that's scratch resistant (But Not Scratch-Proof) and overtime, will show scratches and wear marks.

Table 1: Comparative analysis of AQUAthane vs UVthane.

	AQUAthane <i>UV Resistant Water-Based Polyurethane</i>	UVthane <i>UV Resistant Oil-Based Polyurethane</i>
Durability	3-5 Years	5-10 Years
Curing Time		
Touch Dry:	12 Hours	2 Hours
Light Traffic:	24 Hours	16 Hours
Heavy Traffic:	48 Hours	48 Hour
Thickness	Thin multi-coats (200micron)	Can be applied thicker (300micron)
Hardness	More susceptible to Surface Scratching	More susceptible to dents
Colour	Milky emulsion cured to natural finish surface	Crystal Clear cured to Clear Glass Finish
Odour	Odourless	Part A Odouless Part B super mild Amine smell
Cost	Economical	More Expensive
Environment	Inherently Biodegradable	Non-Biodegradable
Solid Content	45%	94%
Feel	Good	Better
Look	Smooth Natural Finish	Smoother Glass Finish
Kit Sizes	Single Pack 5Lt & 20Lt	Twin Pack 1.15Lt, 2.5Lt, 4.6Lt & 12.8Lt
Application	Roller, Brush & Spray	Roller, Brush & Squeegee
Coating	Min 3 coats – Thin Application	Min 2 Coats – Thin Application

For further information please contact technical team of SHIMICOAT or refer to product brochure.