



TECHNICAL INFORMATION & INSTALLATION

TOTALLY DEFEND WB URETHANE - TDWBU

Product:

Totally DEFEND (Water Based Urethane) – Water based clear coating for interior or exterior concrete & timber surfaces (TDWBU).

General:

TDWBU is a water based, high solids, UV stable, two component aliphatic polyurethane, high-performance topcoat sealer. Specially produced for use in in any application where a solvent based urethane top coat would be used, where a low odor is desired.

Once applied to interior or exterior surfaces it dries to a hard, durable film that has excellent resistance to impact, abrasion, and weathering. Treatment of surfaces maximises gloss retention and resistance to heavy traffic resulting in easier maintenance/cleaning regimes and healthier environments.

Properties:

- Excellent resistance to impact, abrasion, and weathering.
- Water based.
- Quick dry time (touch dry 30-45 minutes) but does not produce lapping or overlap marks.
- Substantial performance improvements over first generation catalyzed water-based polyurethanes including higher film build capabilities, improved chemical resistance and resistance to hot tyre staining.
- Low odour.
- Excellent colour enhancement of concrete aggregates without creating “deep wet look” of concrete matrix.
- Excellent adhesion to concrete surfaces.
- Resistant to heavy traffic.
- Maximum gloss retention.
- Ease of cleaning.
- High build capabilities.
- Non-yellowing, non-caulking, non-blushing product.
- Available in a matte or gloss finish.
- Excellent chemical & moisture resistance.
- Easy application.
- Can be applied by brush, roller or airless sprayer.
- Suitable for internal and external use.
- Is clear.



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Chemical Properties:

Category:	2 component waterborne polyurethane.
Colour:	Clear.
Solids Content:	44%.
Mixing ratio:	4:1.
Gloss Level:	Gloss or Matte (satin or semi gloss can be achieved by combining Gloss & Matte versions).
Touch Dry:	30-45 minutes.
Pot life:	Up to 45 minutes (depending on relative temperature & humidity).
Recoat:	6hrs.
Full cure:	5-7 days.
Coverage:	Up to 10m ² per litre.
Shelf life:	12 months.

Range of applications:

TDWBU is suitable for, (but not limited to), use in the following applications:

- Topcoat sealing of internal and external surfaces in commercial, industrial, retail and residential environments. This can include clean rooms, hospitals, concrete counter tops and high traffic retail areas. It is also suitable for aircraft hangars, automotive repair facilities and garage floors.

Application Instructions:

- **It is advised that prior to use on any surface, a small test area should be prepared to observe drying time, coverage rate of material and finished colour.**
- **Gloss product should always be used for first coat to ensure best adhesion to surface and best colour enhancement as it is free from matting agent.**
- Temperature range for optimal application 15-25 degrees and away from direct sunlight. Surfaces should not be hot from floor heating or direct sunlight.
- Best results are achieved using at least 10mm nap micro fibre roller. Do not “stretch” product to achieve higher coverage rates than outlined as this will most likely result in overlap marks.
- Ensure to always keep a “wet edge” when rolling over an already sealed area to avoid overlap marks. Wet edge can be extended by the addition of water to the mix (up to 10% by volume).
- If using matte or satin (combination of gloss & matte product), ensure mixed product is regularly agitated as matting agent will settle in the bottom of the mix and create an uneven appearance when product applied to the floor.
- If using matte product, ensure Part A is **thoroughly mixed** in its container prior to decanting.



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Mixing Instructions

1. Mix only the amount of material that can be used within a 35 minute period at 25° C. Higher temperatures reduce work time. In hot weather, it is advisable to mix smaller batches.
2. Always premix Part A before decanting into a smaller container or paint tray or before the addition of Part B. Mixing ratio is 4 parts A to 1 part B. Add part B slowly while mechanically mixing part A with a slow speed drill. Mix for 3 full minutes until completely homogenized. Material cannot be properly mixed by hand.
3. Use a small mixing paddle for mixing small amounts.
4. TDWBU is normally applied as is but may be thinned up to 10% with water to achieve a lower viscosity and longer wet edge if desired. Only add water after A and B have been mixed together.
5. Pour through a paint strainer or stocking after mixing and prior to use to ensure there are no lumps or dried flakes from container/mixing tray/mixing apparatus.
6. Part B for Gloss product can be used for Matte product and vice versa.

Surface preparation/Binding

1. Surface must be prepared so as to be clean and sound, free from oil, dirt, waxes and any other contaminants that may interfere with bonding, prior to application. One method includes scrubbing with detergent, acid washing, neutralizing, acetone wipe or pressure washing to clean and rinse. Mechanical means such as diamond grinding is preferred for best adhesion. If applying product to mechanically ground surface, ensure surface is well vacuumed and then mopped with damp micro fibre mop.

Previously coated surfaces must be mechanically cleaned and abraded using 80-100 grit sandpaper to ensure intercoat adhesion.

Application

1. Apply to surface at a rate of approximately 1 litre per 5 – 10 square metres (m²) by brush, roller or airless sprayer to ensure even application. Product should not be allowed to puddle or accumulate in joint areas. Applications heavier than 5Sq m per litre may create bubbles in the cured coating. If multiple coats are required, and the material has cured for more than 24 hours, de-gloss with an abrasive pad or fine 100 grit sanding screen.
2. The product is dry to touch at 30-45 minutes in temperatures of 25 degrees celcius or warmer.
3. Recoat is possible after 6hrs.
4. The product must cure for at least 18 hours prior to light foot traffic commencing, vehicle traffic can commence from 48 – 72 hours with the full cure time being 7 days from application.
5. Do not apply below 10 degrees celcius or over 85% relative humidity. Low surface air temperature and higher humidity will increase drying time/curing rate. Ensure there is adequate air movement to assist in curing.



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Coverage Rates:

Expected coverage rates of material:

1. Surface sealant – 1 litre per 5-10m²

Coverage rates will vary depending on the depth of application of this product and porosity of material being sealed.

General Considerations and Care:

- WORX+ recommends using slip resistant granules in all outdoor applications where the WB Urethane will be used as a topcoat sealer and on indoor applications that may be exposed to water, oil or other spills that may cause a slippery environment. Aluminum oxide granules 80 grit or coarser may be added to the prime coat to achieve the amount of slip resistance desired. It is the end user's responsibility to determine the suitability of a coating for their particular application.
- The pot life of the prepared product is up to 45 minutes, therefore, only mix the amount of material that can be used within this timeframe.
- Higher temperatures reduce work time. In hot weather, it is advisable to mix smaller batches and thin with water to increase pot life.
- All concrete floors not poured over a proper moisture barrier, are subject to possible moisture vapour transmission or hydrostatic pressure problems which can cause a coating system to blister or fail. Before applying a coating system over a concrete floor which is on-grade or below grade, the customer should consider having a qualified moisture testing company perform calcium chloride test to give the proper recommendations for use.
- Where this product is to be applied over acid stain/ dye or over colour flake, a primer must be applied beforehand.

Clean up:

- Clean sprayers and associated accessories with water immediately after use.

Safety Measures:

- Consult the Safety Data Sheet (SDS) prior to using material.
- Appropriate PPE in particular respiratory, hand, skin and eye protection, must be used when handling and applying TDWBU.

First Aid:



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- **Ingestion:** Can cause gastrointestinal irritation. Rinse mouth and give plenty of water to drink, stop if the exposed person feels sick. Vomiting should be avoided. Seek medical attention immediately. If unconscious, place in recovery position and seek medical attention immediately.
- **Inhalation:** Irritating to respiratory system. Asthmatic conditions may develop and may be immediate or delayed. Remove to fresh air. If irritation develops, seek medical attention.
- **Eye Contact:** Can cause serious eye irritation. Immediately flush affected eye(s) with clean water for at least 15 minutes. Seek medical attention immediately.
- **Skin Contact:** Wash affected area using water and a mild detergent. Remove contaminated clothing. If irritation develops, seek medical attention.

Disclaimer:

All information presented in this document is based on experience gained from either WORX+ in-house testing and R&D or observations made by end users and reflects the best of our knowledge to date.

Due to the range of variables present and often unique to any give application environment, the information presented in this document along with other written or verbal information that may be supplied regarding this product, should be viewed as non-binding and a guide only. Purchasers should always perform their own tests to assess product suitability for the given application & environment.