

AQUA URETHANE 2PACK®

TECHNICAL DATA SHEET

DESCRIPTION

Aqua Urethane 2Pack® is a water based, non-yellowing, two pack polyurethane sealer for concrete, flake floors, epoxy coatings, metallic epoxy, polished concrete and exposed aggregates, and can be used on floors and walls. This high-performance polyurethane coating has an excellent clarity and UV resistance, provides an extremely tough, hard-wearing film and is used as a durable protective coating for high traffic areas and commercial environments, where an outstanding resistance to weathering and excellent gloss or matte retention is required. It is perfect for the use in a wide range of environments where a lasting solution to floor maintenance problems is essential. The products unique features and benefits are water, alcohol, petrol, alkalis, acids & chemical resistant, with an excellent adhesion, high durability, joint less, easy and fast to apply, and easy to clean and maintain. Can be used interior & exterior, and on slightly damp surfaces.

FEATURES & BENEFITS

- Water based
- Low odour
- Low VOC
- Easy to apply
- For interior & exterior use
- Excellent wear resistance
- Excellent chemical & stain resistance
- Excellent scratch resistance
- Seamless finish
- Easy to apply, clean & maintain

RECOMMENDED USE

- Decorative finishes
- High Traffic areas
- Hallways, Corridors & Hospitals
- Polished or Hooped Concrete
- Shopping Centres & Shops
- Sealing Concrete and Driveways
- Factories and Warehouses
- Industrial, Domestic and Retail Flooring
- Top Coat for Epoxies and Flake Flooring
- Restaurants & Public Municipalities
- Schools, Showrooms & much more

TECHNICAL DATA & CHARACTERISTICS

| | |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| APPEARANCE | Liquid |
| COLOUR | Clear/Milky White or various colours as tinted version |
| VOLUME SOLIDS | 46 % Gloss or Matte 68% solids Tinted Version |
| FINISH | Gloss or Matte Tinted Version Semi-Gloss |
| COVERAGE ¹ | 6 – 12m ² |
| MIX RATIO | 4 : 1 (4 Parts A to 1 Part B) by Volume |
| PACK SIZES | 20L Kit (16L Urethane Part A and 4L Hardener Part B) |
| SPECIFIC GRAVITY | Part A 1.03 – 1.80kg/l Part B 1.07 kg/l |
| POT LIFE ² | 1 – 2 hours |
| DRYING TIME ³ | 30 – 90 mins @25°C |
| RECOAT TIME ³ | 3 – 6 hours @25°C |
| FULL CURE ³ | 7 days @25°C |
| SHELF LIFE | 12 months, if properly stored in original unopened containers at temperatures between 10°C and 30°C, away from direct sunlight. |

¹ Coverage is dependent on porosity of surface, spread rate, and application methods.

² The pot life depends on climatic conditions and temperatures. Refer to the table under 'Curing Times'.

³ Drying times generally depend on air circulation, air temperature, humidity, film thickness, substrate temperature, and application methods. Refer to the table under 'Curing Times'.

The figures given above and within this technical data sheet are typical with good ventilation, recommended film thickness and single coat application.

SURFACE PREPARATION

All surface preparations must be carried out to Australian Standards or International Standards. New concrete must be cured for a minimum of 28 days before coating.

A concrete moisture test should be carried out prior to coating application as per Standard ASTM4263 and/ or International Standards. The moisture content should be less than 4%.

The surface to be treated must be structurally sound and the substrate compressive strength should be at least 25MPa. The substrate tensile strength should be at least 1.5N/mm². All non-structural cracks, holes and surface deformities should be repaired prior to coating.

In general, the surface to be treated **MUST** be clean and free of all traces of loose material, dirt, debris, mildew, oil, grease, old coatings, curing compounds, release agents, laitance, dust, and other contaminants.

All new or old concrete surfaces should be prepared by mechanical grinding, abrasive blasting, blast-tracking, or any other suitable preparation and cleaning methods. Surface profile should exceed CSP 3 after preparation.

Check if all traces of oil and other contaminations has been completely removed prior coating application. You can check that all traces of oil and other contaminants have been completely removed by sprinkling a few drops of water over the surface. If the water hydrates quickly into the substrate, the surface is sufficiently oil and grease-free.

For more detailed information, see following standard codes of practice, guides, and techniques:

ASTM D4258 Standard practice for surface cleaning concrete for coating

ASTM D4259 Practice for abrading concrete

ASTM D4260 Practice for liquid and gelled acid etching of concrete

ASTM D4262 Test method for pH of chemically cleaned or etched concrete surfaces

ASTM D4263 Test method indicating moisture in concrete by the plastic sheet method

ASTM D4285 Test method for indicating oil or water compresses air

APPLICATION GUIDELINES

Pre-Tinted Versions

Firstly, stir Aqua Urethane 2Pack® Part A thoroughly before use to disperse the colour pigments consistently. Use a mechanical mixer to ensure thorough mixing and avoid aeration during the process. Always add Part B later and mix with Part A after Aqua Urethane 2Pack® Part A has been thoroughly stirred and any aeration has disappeared. Mix thoroughly and check the colour and gloss levels before application. If your project requires multiple kits, you MUST box the kits together for colour consistency. The user is responsible for applying the correct colour and checking overall colour consistency.

Mixing & Application - General Information

Before use, stir Aqua Urethane 2Pack® Part A thoroughly on its own to ensure the even dispersion of ingredients or matting agents. The mix ratio is 4:1 by volume. Mix Aqua Urethane 2Pack® (4 Parts A) with Aqua Urethane 2Pack® Hardener (1 Part B). Always add Part B slowly into Part A while mixing. Once all of Part B has been combined with Part A, add water slowly while still mixing. Use a mechanical mixer to ensure thorough mixing and avoid aeration when mixing the product. Do NOT mix polyurethane batch manually. Mix thoroughly and check the consistency and gloss levels before application. For projects requiring multiple kits, it is essential to box the kits together to ensure uniformity. The user is responsible for verifying the correct product and ensuring consistent gloss or matte levels. Apply the product using a lint-free epoxy roller. Once thoroughly mixed and ready for application, it is recommended to pour the mixture into a tray to ensure controlled handling. Dispense only as much onto the surface as can be promptly worked with, and roll it out evenly. While experienced applicators may prefer to pour the mixture directly onto the surface for efficiency, using a tray is a safer and more controlled method.

Mixing & Application - Prime Coat

Prime coat is Aqua Urethane 2Pack® diluted with 50-100% water.

The prime coat must always be applied with Aqua Urethane 2Pack® Gloss, even if the final finish will use Aqua Urethane 2Pack® Matte. Always prime surface before applying the base coat to prevent pin holing and to minimise sink-back of material. Apply the prime coat at a rate of 7-10m²/L, depending on substrate porosity. For the prime coat, add 50-100% water for dilution by volume per mixed litre of urethane. Check for pinholes, and if needed, apply a second prime coat. Refer to the table below for examples of mixing ratios.

| Prime Coat | 1L | 2L | 3L | 4L | 5L | 6L | 7L | 8L |
|------------|------|------|------|------|------|------|------|------|
| 4 Parts A | 0.8L | 1.6L | 2.4L | 3.2L | 4.0L | 4.8L | 5.6L | 6.4L |
| 1 Part B | 0.2L | 0.4L | 0.6L | 0.8L | 1.0L | 1.2L | 1.4L | 1.6L |
| 50% Water | 0.5L | 1.0L | 1.5L | 2.0L | 2.5L | 3.0L | 3.5L | 4.0L |

Mixing & Application - Base Coat

Base coat is Aqua Urethane 2Pack® diluted with 25-50% water.

Apply the base coat at a rate of 6m²/L. For the base coat, add 25-50% water for dilution by volume per mixed litre of urethane. Refer to the table below for examples of mixing ratios.

| Base Coat | 1L | 2L | 3L | 4L | 5L | 6L | 7L | 8L |
|-------------|-------|------|-------|------|-------|------|-------|------|
| 4 Parts A | 0.8L | 1.6L | 2.4L | 3.2L | 4.0L | 4.8L | 5.6L | 6.4L |
| 1 Part B | 0.2L | 0.4L | 0.6L | 0.8L | 1.0L | 1.2L | 1.4L | 1.6L |
| 25% Solvent | 0.25L | 0.5L | 0.75L | 1.0L | 1.25L | 1.5L | 1.75L | 2.0L |

Please be careful with batch sizes to match pot life. Factors like air circulation, humidity, and temperatures affect pot life and working time. Larger mixes have shorter pot life and faster curing. It is the responsibility of the user to monitor environmental conditions, especially in hotter climates and tropical settings.

After the application, dispose of any remaining material. Do NOT pour any leftover mixed material back into the original container as this can cause all the material to react and harden inside the drum. Once Part A and Part B are mixed, the product will begin to react and cannot be used beyond its pot life. It is recommended to apply at

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least two coats: one prime coat and one base coat, following the minimum spread rate outlined in the technical data sheet.

Generally, the second and any subsequent coats must be applied within 24 hours of the application of the previous coat to ensure chemical intercoat adhesion. If 24 hours has been exceeded, the first coat must be sanded prior to the application of the second coat to assure a sound adhesion between coats.

The noted recommended recoat times, pot life and working times are an indication only. The product mix will cure significantly faster if any of the following are present: high starting point product temperature, high humidity, high room temperature, high airflow, lower dilution water volume in either or both prime and base coats, and prolonged mixing time. Refer to the tables below for examples.

Curing Times

The pot life can vary according to environmental conditions including temperature. Drying times will depend on film thickness, ventilation, temperature, humidity, and application methods. Generally, allow coating to cure for at least 24 hours before light pedestrian traffic and at least 7 days for full cure and vehicular traffic. However, general curing times mentioned in this TDS are based on temperatures of 25°C. Refer to the table below for examples. Table is to be used as a guide only.

Lower temperatures will extend curing times significantly. If the temperature in your region is 12.5°C, all curing times will almost double e.g., full cure will be approximately 10 days. DCC does not recommend application when temperatures are below 10°C. This applies to the gloss and matte version, see table below.

Curing Guide

| Temperature | Humidity | Pot Life | Touch Dry | Light Traffic | Full Cure | Recoat min | Recoat max | Suitability |
|-------------|----------|-----------------|-----------|---------------|-----------|------------|------------|-------------|
| 10°C | <75% | 2-3 hours | 6-8 hours | 24 hours | 10 Days | 14 hours | 48 hours | **** |
| 15°C | <75% | 1.5-2.5 hours | 5-7 hours | 18 hours | 8 Days | 12 hours | 36 hours | **** |
| 20°C | <75% | 1.25-2.25 hours | 4-6 hours | 12 hours | 7 Days | 10 hours | 24 hours | ***** |
| 25°C | <75% | 1-2 hours | 3-5 hours | 12 hours | 6 Days | 8 hours | 24 hours | **** |
| 30°C | <75% | < 1 hour | 2-4 hours | 8 hours | 5 Days | 6 hours | 24 hours | **** |

- ***** Highly Suitable
- **** Suitable
- *** Moderately Suitable
- ** Somewhat Suitable
- * Low Suitability
- Unsuitable, do not use in these conditions

Cleaning

Clean all equipment immediately after use with water.

Coating Maintenance

In general dirt, dust, contaminants, and excessive wear and tear will shorten the life of coating. Keep these areas clean and free from such pollutants and avoid excessive wear and tear. Clean coating regular with warm mild detergent water up to 60°C and rinse with clean water. Do not use abrasive brushes, scouring pads or solvent to clean the coated surface. It is advisable if abnormal wear and tear will occur through moving furniture such as office chairs, keep these areas protected with a protective mat. Further to the above cleaning recommendations please ensure immediate cleaning of any spills. Refer to DCC Maintenance & Cleaning Guide for detailed information.

Compatibility & Suitability

Do NOT mix this product or use this product in combination with any other products or brands. Only products of the same brand and system should be used in combination as a system. Due to the differences in substrates, materials, site conditions and environmental surrounds, the user is responsible for checking the product's compatibility and suitability for its intended purpose prior to application.

PRECAUTIONS

For professional use only. Safety Data Sheet (SDS) and Technical Data Sheet (TDS) must be read before using and opening this product. Keep out of reach of children. Always wear personnel protective equipment (PPE) when handling this product. Keep away from heat and flame. No smoking. Provide adequate ventilation. For more details refer to SDS.

Do not apply if the air or surface temperature is below 10°C, or if the temperature is likely to drop below 10°C during applying, or after application, within the curing time, or if relative humidity is expected to become above 85%. Observe dew point.

Surface staining and discolouration may result from exposure to some aggressive chemicals. Staining and discolouration will not affect the performance of the coating.

Do not apply if the substrate is subject to hydrostatic pressure or rising dampness.

Do not apply if the surface temperature is over 30°C, or if the surface temperature is likely to rise above 30°C during application, or after application within the curing time, or if relative humidity is expected to become above 85%.

Do not apply if the substrate is subject to rain or moisture, and protect the surface for at least 24 hours against any water impact or moisture after application and within the curing time. Do not use any product past its pot life. Store in a locked up, cool, dry, well-ventilated place, away from sunlight, between 10°C and 30°C. Keep container tightly closed.

Maintain a continuous wet edge during application to prevent variations in gloss, satin, or matte levels, as well as colour inconsistencies or visible roller marks. Ensure the film thickness is applied evenly, as uneven thickness will lead to visible variations in gloss, satin, or matte levels. Do not roll back into a coat once it has started to tack or set.

Please note that a high substrate pH can drastically alter the curing profile of Aqua Urethane 2Pack®, causing issues such as gelling on the roller or overly fast tack-off on the floor. Always dilute Aqua Urethane 2Pack® with water according to the application guidelines.

Do not apply this product if there is uncertainty about its application or surface preparation.

DISCLAIMER

This Technical Data Sheet is to be used as a guide only and is NOT a substitute for a specification. Durable Concrete Coatings Pty Ltd has no control over on-site conditions, application methods, environmental temperatures, the use or storage of this product and does not accept liability in this regard. Any verbal advice provided by staff of Durable Concrete Coatings Pty Ltd should not be treated as authoritative information or instructions for use.

This information may be subject to change without notice to you, all users should ensure they have current information. This product is intended for use by skilled tradesman and where applicable, statutory licensed tradesmen experienced and trained in the use of this product.

Due to differences in substrates, application methods and local conditions purchasers of these products must ensure that it is suitable for their specific application before using these products. The information contained in the technical data sheets, safety data sheets, and technical notes is accurate to the best of our knowledge.

Durable Concrete Coatings Pty Ltd cannot guarantee that the information contained is wholly comprehensive. Subject to the provisions of the Competition and Consumer Act 2010, the company's liability in relation to defective products shall be limited to replacement of the product, if the product is proven to be defective. All Durable Concrete Coatings Pty Ltd terms and conditions apply.