

BUILDING CHEMICALS SPECIALISTS

Unithane W/D **2 part Polyurethane Floor Coating** **Waterborne (Water – Based)**

Product Data

Unithane W/D Polyurethane coating waterborne is a **two component pigmented water dispersed** coating. It has a very good adhesion to most sound substrates and provides a dustproof easily cleaned surface, with good chemical spillage resistance.

Product is according to **European Standard EN 13813:2002 Screed materials and floor screeds - Screed materials - Properties and Requirements.**

It is a formulation of **Bayer Germany** and the resins are imported from **Bayer**.

Typical Uses

The **Unithane W/D** coatings are suitable for sealing concrete and screed surfaces as well as synthetic resin coatings in indoor applications. Exterior application is also possible. Interfaces should be touched as soon as possible, otherwise roller marks may become visible. The overcoating window must be observed. Has excellent ability to withstand splashes and spillages of a wide diversity of corrosive chemicals. A slip resistant finish is also available by sprinkling special sand into the surface.

Unithane produces a hard elastic coating and therefore it is eminently suitable for use in a wide diversity of industries which includes food and beverages, chemical processing, pharmaceuticals, and engineering, etc., whilst its outstanding dustproofing properties makes it invaluable for warehouse, garages, car parks and general factory areas.

It is ideal for use in areas where solvents are not permitted and in confined spaces where ventilation may be inadequate.

Reasons for using Unithane W/D

- Easy and fast to apply.
- Prevents Dusting.
- Good abrasion resistance.
- Durable Finish.
- Suitable for Light Warehouse Traffic and garages.
- Suitable for Hygiene Linings.
- Environmentally friendly and can be applied in unventilatory uses.
- Water Dispersible System.
- Oil and water resistant.
- Good Resistance to Dilute Chemical Solutions
- Slip resistant finish is also available.

Preparation

Surfaces must be free from loose dust, debris and other contaminants. Any oil or grease deposits can be removed by a hot detergent wash with a suitable cleaner such as Uniclean, available from Frinics.

Any laitance or ingrained oil and grease will require mechanical removal by using grid blasting machine. Dust must be removed by vacuum machine before application of the product. Damage to substrate or incorrect falls should be rectified using Unibond screed before applying the **Unithane W/D system**.

Substrates:

Concrete Substrate must be strong, stable and sound with a minimum compressive strength 25N/mm².

For application on previous flooring please contact Frinics Technical services for specific advice.

Mixing

Unithane W/D is supplied in a **two part system**, comprising of a **primer** and **topcoat**.

Primer – One part product. Mix thoroughly

Top Coat – Two component product with base and hardener. The pigmented base must be thoroughly stirred and agitated to disperse sedimentation and achieve consistency of colour. The hardener should then be added to the base component and mixed thoroughly. Take care to minimize foaming. Allow to stand for 5 minutes before application onto prepared concrete.

Application

Apply a sufficient thickness of the primer and the topcoat using a roller suitable for use with waterborne systems or airless spray to achieve an even substantial coat of the surface area in a sufficient thickness. When applied by roller to very rough substrates, care must be taken to avoid the formation of puddles in which excessively high wet film thicknesses occur. Water can become encapsulated in the film, which under certain circumstances can result in flaws.

For general use 1 coat primer and 2 coats of paint is recommended.

Slip resistance - Slip resistance can be added by simply sprinkling **silica** sand into the 2nd coat whilst the final coat is still wet and then seal with the last 3th coat.

The method of application is first to apply the primer and then to broadcast about 0.5-1.0 kg/m² of **silica sand** into the **2nd Unithane W/D Coat** whilst it is still wet. Allow to dry, then remove all loose unrestrained sand and apply the **3rd coat of Unithane W/D Coat** to seal the system as described below.

Note: Unithane W/D material consumed on the final coat will increase relative to the aggregate used.

The full system is therefore:

1st Coat: Unithane W/D Primer

2nd Coat: Unithane W/D Top Coat
and slip resistant silica sand if required,
sprinkled whilst coat is still wet.

3rd Coat Unithane W/D Top Coat
to seal slip resistant silica sand.

Physical Data

Finish: Semi-Gloss
Slip resistant finish is also available

Colours: **Base:** Coloured Liquid
Hardener: Transparent Liquid
Finish product: Grey, Beige, Liquid.

Components: **Primer:** 1
Top Coat: 2

Temperature resistance: up to 70°C

Recommended Thickness:

Primer: 50-100 microns
Topping: 100-150 microns for each coat

Total dry film thickness:

1 coat primer +2 coats UNITHANE W/D paint
300-400 microns

Curing mechanism: Chemical reaction and water release

Curing Time at 20°C:

Light Foot Traffic: 12 hours
Full Cure: 3 days

Overcoating time:

Primer: 10°C 4-8 hours
20°C 2-4 hours

(Primer will remain slightly tacky, this is normal)

Topcoat: 10°C 4-10 hours
20°C 4-6hours

Pot Life at 20°C:

Primer: 60 minutes (approx.)
Top Coat: 90 minutes (approx.)

Practical coverage:

It depends upon the substrate condition and profile.

Primer: 0.15kg/m²

A 5.0kg unit of primer covers approximately 33m².

Topping: 0.18kg/m²/coat

A 7.65kg unit of topcoat covers approximately 21.25m² for 2 coats.

Equipment Cleaner: Water

Density: **Base:** ~1.13 kg/ltr
Hardener: ~1.09 kg/ltr
Mixed Resin: ~1.13 kg/ltr

All Density values at 23°C (EN ISO 2811-1)

Solid Content: ~70% (by volume)
~75% (by weight)

Mechanical Characteristics:

Bond Strength: 2.0 N/mm² (EN 4624)

Abrasion Resistance: 65 mg
(8 days /+ 23°C) DIN 53 109

Material is non Flammable

Pack sizes:

Primer 5.0 kg in 5 ltr tin
Topcoat base 7.0 kg in 10 ltr tin
Topcoat hardener 0.65 kg in 1 ltr tins

Shelf life:

Primer and Topcoat component: 1 year in unopened containers

Protect from extreme temperatures and keep dry during shipment and storage. Discard damaged or open containers

Limitations

All Frinics products are manufactured to a high standard of quality. They are sold subject to Frinics Conditions of Contract or Sale - copy available upon request. Whilst Frinics strives to ensure that any advice, information or recommendations given are appropriate and correct, it cannot, since it does not have complete control over the method and place of application of the products, accept any liability directly arising out of the use of products.

Health and Safety at Work

Warning and information concerning the safe handling and use of our products are displayed on their containers and in a Health and Safety data sheet. It is the Purchaser's responsibility to ensure that the materials are stored and handled safely.

Safety Precautions

Read each component's Material Safety Data Sheet before use. Mixed material has hazards of each component. Safety Precautions included with Application Instructions must be strictly followed during storage, handling and use. Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Safety Equipment Required

Suitable eye protection and clothing must be worn this preparation. When applied by Spray, HSE type mask must be used.

Normal precautions should be taken during application to provide adequate ventilation, particularly when working in enclosed spaces.

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