

# BUILDING CHEMICALS SPECIALISTS

## Uniseal Polyurethane Floor Coating

### Product Data

**Uniseal Polyurethane coating is a one component pigmented synthetic resin seamless floor.** 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

**Uniseal** is recommended for dust proofing and upgrading friable surfaces. It densifies and hardens within the porous structure of the floor finish, providing a floor which is dust free, and shows an improved resistance to chemicals, oils and water.

**Uniseal** has a most excellent ability to withstand splashes and spillages of a wide diversity of corrosive chemicals, embracing inorganic, organic acids, alkalies, solvents, salts, oils, fuels, etc.

For dustproofing and sealing application a **four-coat system** produces a really tough, hard and impermeable floor coating. A slip resistant finish is also available by sprinkling special sand into the surface.

**Uniseal** 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 it's outstanding dustproofing properties makes it invaluable for warehouse, garages, car parks and general factory areas.

### Reasons for using Uniseal

- Easy and fast to apply.
- Prevents Dusting.
- Good abrasion resistance.
- Durable Finish.
- Suitable for Light Warehouse Traffic and garages.
- 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 **Uniseal system**.

**Application of Uniseal to damp surfaces will result in ultimate loss of bond.**

### Substrates:

Concrete Substrate must be strong, stable and sound with a minimum compressive strength 25N/mm<sup>2</sup>.

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

### Mixing

**Uniseal** is supplied in a **two part system**, comprising of a **primer and topcoat**.

**Primer** – One component product. Mix thoroughly

**Top Coat** – One component product. Mix thoroughly

### Application

The primer and topcoat can be applied using a suitable brush or roller or airless spray to achieve an even substantial coat of the surface area in a sufficient thickness. Curing or over coating time is dependent upon temperature.

If primer is left for more than 24 hours before overcoating it will be necessary to re-prime.

**For general use 1 coat primer and 3 coats of paint is recommended.**

**Slip resistance** - Slip resistance can be added by simply sprinkling silica sands into the 3<sup>rd</sup> coat whilst the final coat is still wet and then seal with the last 4<sup>th</sup> coat.

The method of application is first to apply the primer and the **1<sup>st</sup> coat of UNISEAL pigmented lacquer** and then to broadcast about 0.5-1.0 kg/m<sup>2</sup> of **silica sand** into the **3<sup>rd</sup> Uniseal Top Coat** whilst it is still wet. Allow to dry, then remove all loose unrestrained sand and apply the **4<sup>th</sup> coat of UNISEAL pigmented lacquer** to seal the system as described below.

**Note:** **Uniseal** material consumed on the final coat will increase relative to the aggregate used.

The full system is therefore:

**1st Coat: Uniseal Primer.**

**2nd Coat: Uniseal pigmented lacquer.**

**3rd Coat: Uniseal pigmented lacquer**  
and slip resistant silica sand if required,  
sprinkled whilst coat is still wet.

**4th Coat Uniseal pigmented lacquer**  
to seal slip resistant sand.

Uniseal is not merely a simple dressing but is the basis of a series of floor coating systems.

## Physical Data

**Finish:** Semi-Gloss  
Slip resistant finish is also available

**Colours:** Clear, Grey and Green.

**Components:**

<b>Primer:</b>	1
<b>Top Coat:</b>	1

**Temperature resistance:** up to 70°C

**Recommended Thickness:**  
**Primer:** 50-75 microns  
**Topping:** 100-125 microns for each coat

**Total dry film thickness:**  
1 coat primer +3 coats UNISEAL paint  
**350-450 microns**

**Curing mechanism:** Chemical reaction and diluents release

**Curing Time at 20°C:**  
**Light Foot Traffic:** 12 hours  
**Full Cure:** 3 days

**Overcoating time:**

<b>Primer:</b>	10°C	6-12 hours
	20°C	3-6 hours

(Primer will remain slightly tacky, this is normal)

<b>Topcoat:</b>	10°C	10-16 hours
	20°C	4-6 hours

**Pot Life at 20°C:**  
**Primer:** 60 minutes (approx.)  
**Top Coat:** 60 minutes (approx.)

**Practical coverage:**  
It depends upon the substrate condition and profile.

**Primer:** 0.15kg/m<sup>2</sup>  
A 5.0kg unit of primer covers approximately 33m<sup>2</sup>.

**Topping:** 0.20/m<sup>2</sup>/coat  
A 20.0kg unit of topcoat covers approximately 33.3m<sup>2</sup> for 3 coats.

**Equipment Cleaner:** Uniseal Thinner

**Density:** ~1.1 kg/ltr

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

**Solid Content:** ~100% (by volume)  
~100% (by weight)

### Mechanical Characteristics:

**Bond Strength:** 2.0 N/mm<sup>2</sup> (EN 4624)

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

### Material is non Flammable

**Pack sizes:**

<b>Primer</b>	5.0 kg in 5 ltr tin
<b>Topcoat</b>	20.0 kg in 20 ltr tin

### 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 musk must be used.

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

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