# DURABOND SL

## Self Levelling Epoxy Floor Topping

Technical Data Sheet

### 1-2 mm self levelling epoxy floor Topping

### Description

Durabond SL is a Self levelling Epoxy flooring composition, which is chemical resistant, impervious and extremely easy to clean. Durabond SL is available in a wide range of colours and is ideal for industrial or commercial locations where a hard-wearing, hygienic, dust-free environment is important.

### Advantages

- Hygienic Self smoothing formulation provides a dust-free, seamless floor which is extremely easy to clean
- Easy to lay Excellent rate of application can be achieved.
- Hard-wearing Good abrasion resistance. Withstands foot and vehicular traffic.
- Chemical resistant Very good resistance to many industrial chemicals
- Attractive Available in a wide range of colours to provide a very attractive floor finish.

### Application Area

- Laboratories,
- Pharmaceutical industries
- Hospital clean rooms,
- Electronics assembly plants,
- Switchgear plant rooms, ,
- Food processing industries,
- Light industrial plants

### Material Properties

| Property | Typical Value |
|---|---|
| **Duraprime EP** | |
| Pot life | 60 min |
| Max Overlay time | 24 Hrs |
| **Durabond SL** | |
| Specific Gravity | 1.6 gm/cc |
| Pot Life | 40 Min |
| Initial Cure (Foot Traffic) | 24 Hr |
| Full Cure ( Vehicular Traffic Load) | 7 Days |

### Physical properties

| Property | Typical Value |
|---|---|
| **Durabond SL** | |
| Compressive strength | 72 N/mm$_2$ ( to BS 6319, pt 2) |
| Flexural strength | 35 N/mm$_2$ (to BS 6319, pt 3) |
| Tensile strength | 20 N/mm$_2$ (to BS 6319, pt 7) |
| Bond strength | >3.5 N (Concrete Failure) |
| Abrasion resistance | 0.1-0.15 mg /cycle - loss (ASTM D 4060) CS 17 Wheel |
| Shore D Hardness | 70-80 |

### Chemical Resistance

Resistance to various chemicals at ambient temperature (25 - 35$^0$C) (6 months immersion)

| No. | Chemical | Concentration | Observation |
|---|---|---|---|
| 1. | Acetic acid | 5% | Resistant |
| 2. | Hydrochloric acid | 20% | Resistant |
| 3. | Sulphuric acid | 50% | Resistant |
| 4. | Nitric acid | 10% | Resistant |
| 5. | Phosphoric acid | 30% | Resistant |
| 6. | Salt solution | Concentrated | Resistant |
| 7. | Sodium hydroxide | 30% | Resistant |
| 8. | Water | - | Resistant |
| 9. | Lactic | 10% | Resistant |
| 10. | Citric acid | 10% | Resistant |
| 11. | Petrol | - | Resistant |
| 12. | Oil | - | Resistant |
| 13. | Fruit Juice | - | Resistant |

### Application Method

Adequate surface preparation and repair is undertaken prior to application of flooring systems. Advice on specific applications may be obtained from the manufacturer. All floors to receive Durabond SL epoxy system should be protected by means of a damp-proof membrane. The absence of such membranes could lead to the problem of osmosis/rising dampness where soluble salts have concentrated. New concrete or cementitious substrates should have been placed at least 28 days earlier and have a moisture content of less than 5%

before topping with Durabond SL. This can be checked by using a Thermo Hygrometer.

## Surface preparation

The long term durability of the applied Durabond SL epoxy is dependent upon the adhesive bond achieved between the flooring material and substrate. It is most important therefore, that substrate surfaces are correctly prepared prior to application. All substrates should be sound and free from contamination such as mortar and paint splashes, curing compound residue, oil or grease. Excessive laitance should be removed by light mechanical scrabbling, grinding or grit blasting. Light laitance may be removed by acid etching followed by thorough washing with clean water, vacuum cleaning and then allowing the surface to dry. Oil and grease contamination must be completely removed by grinding down to sound, clean concrete. Alternatively, shot blasting techniques can be used to provide the required substrate.

Old concrete floors with deep seated contamination and substrate damage must be prepared by any of the mechanical methods as previously described.

It is essential that a sound, clean substrate be provided.

## Priming

Prepared substrates to be treated with Durabond SL should be primed with Duraprime EP Components of the primer should be mixed in the proportions supplied by adding the entire contents of hardener can to the base can. Once mixed the primer should be immediately applied in a thin, continuous film using stiff brushes or rollers. Over application and puddles should be avoided. Porous floors may require two coats of primer. Primer should be allowed to become tack free prior to application of Durabond SL.

## Mixing

Durabond SL is supplied in pre-weighed packs ready to use on site. Solvent or thinners, should not be added. A forced action mixer with a paddle fitted into a heavy duty, slow speed electric hand drill is recommended for mixing. Hardener component is mixed with Base resin in a suitable mixing vessel. The full colour paste is then added and mixed until an even colour is obtained. Finally the filler as supplied is added and mixed further for three minutes until a homogenous lump free slurry is obtained.

## Laying

The material is poured onto the primed substrate and spread to the required thickness with a serrated trowel for desired thickness. The material should be spread slowly and evenly.

Immediately after spreading, the floor should be firmly rolled with a spiked roller to help release any entrapped air in the material and level any slight trowel marks. Allow to cure for 24 Hrs.

## Note

In certain conditions, a light oily film may appear on the surface of the floor on curing. This may be easily removed after a minimum curing period of 48 hrs, by washing with a liquid detergent floor cleaner and water.

## Expansion joints

Durabond SL should be discontinuous over sealants in joints unless otherwise specified.

## Cleaning

Tools and equipment should be cleaned with Thinner T 621 immediately after use. Spillages should be absorbed with sand or sawdust and disposed in accordance with local regulations.

## Limitations

It is not compatible for application over asphalt, unmodified sand-cement screeds or PVC tiles and sheets. Durabond SL laid floor will be scratched due to nails or sharp objects protruding from machinery, packings, or trolleys moving on the floor. Presence of sand will also cause abrasion.

The product is not advised to be applied below $10^0$C as the flow reduces. While applying the product above $35^0$C, there can be a problem of low pot life etc., and it will be difficult to apply the material. Cured product is not suitable for exposure to subzero temperatures and above $65^0$C. When there is not enough material in a given area, roller marks caused due to spiked rolling may not close which will result in an undesirable finish. The product is not suitable for areas exposed to direct sunlight

## Storage

In unopened packs, Durabond SL and Duraprime EP have a shelf life of 12 months when stored in warehouse conditions below $35^0$C.

## Disclaimer

*This information is intended only for general guidance in the application of our product. It has been obtained by careful investigation and represents the present state of our knowledge and experience. Because of the large number of possible methods of application and processing we are not able to assume responsibility in any one particular case for either the technical results or the patent rights situation applicable to the country under consideration*

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DVR Coatings

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