# DRI-FLOOR EP 1800

## High Performance, Chemical Resistant Epoxy Novolac Protective Lining

**DRI-FLOOR EP 1800** is an Epoxy Novolac lining that is specially designed to protect concrete and steel structures against aggressive chemical conditions. It has excellent abrasion resistance and adhesion strength to concrete, mild steel, and other substrates.

**DRI-FLOOR EP 1800** is suitable to be used in areas such as wastewater treatment plants, food processing plants, desalination plants, chemical manufacturing plants, petroleum refineries, and so on.

## FEATURES/BENEFITS

- ✓ Epoxy Novolac lining for protection against chemicals
- ✓ Excellent chemical resistance
- ✓ Excellent adhesion to concrete, mild steel, and other substrates
- ✓ Excellent abrasion resistance

## APPLICATION AREAS

- ✓ Wastewater treatment plants
- ✓ Food processing plants
- ✓ Desalination plants
- ✓ Chemical manufacturing plants
- ✓ Electric power plants
- ✓ Pump and paper mills
- ✓ Petroleum refineries

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**Product Data**

| | |
|---|---|
| Appearances / Colors | Grey |
| Packaging | 14.2 kg/set |
| Storage | 12 months from date of production |
| Storage Condition | Dry conditions at temperatures between +18°C to +30°C. Protect from direct sunlight. |

**Technical Data**

| | | |
|---|---|---|
| Origin | Epoxy Novolac | |
| Specific Gravity | Part A: Approx. 1.55<br>Part B: Approx. 1.02<br>Mixed: Approx 1.42 | |
| Solid Content | Approx. 85% | |
| Compressive Strength | Approx. 90 MPa | |
| Tensile Strength | Approx. 30 MPa | |
| Elongation | Approx. 3% | |
| Flexural Strength | Approx. 45 MPa | |
| Abrasion Resistance | Approx. 0.10 mg/cycle | (1kg, H-22 Wheels) |
| Service Temperature | < 60 °C | |

Pot life

| Temperature | Time |
|---|---|
| + 23 °C | ~ 45 min. |
| + 35 °C | ~ 20 min. |

Tack-Free Time

| Temperature | Time |
|---|---|
| + 23 °C | ~ 8-10 hours |
| + 35 °C | ~ 4-6 hours |

Overcoating Time

| Temperature | Time |
|---|---|
| + 23 °C | < 16 hours |
| + 35 °C | < 10 hours |

Full Cure

| Temperature | Time |
|---|---|
| + 23 °C | 7 days |
| + 35 °C | 5 days |

**Chemical Resistance**

The fully cured coating is resistant to the splash/spillage of the following chemicals:

*(* Any concentration in water)*

- Acetic Acid 25%
- Ammonium Hydroxide*
- Benzene
- Benzoyl chloride
- Benzyl alcohol
- Bleach (Sodium hypochlorite)
- Boric Acid *
- Brake Fluid
- Brine 10%
- Car oil
- Carbon tetrachloride
- Castor Oil
- Deionised water
- Diesel fuel
- Ethylene glycol
- Hydrogen peroxide 20% sol
- Fatty acids
- Formaldehyde 37%
- Gasoline
- Hexamine 25%
- Hexane
- Hydraoine 35%
- Hydrochloric acid 35%
- Hydrofluric acid 25%
- Jet fuel
- Isopropanol
- Ethylene glycol monoethyl ether
- Kerosene
- Methyl isobutyl ketone
- Mineral spirit
- Nicotinic acid *
- Nitric acid 30%
- Phenol 50% in IPA
- Phosphoric acid 85%
- Potassium hydroxide *
- Propylene glycol
- Sea water
- SKydrol
- Sodium hydroxide *
- Sulfuric acid *
- Tartaric acid 50%
- Toulene

- Diethanolamine 88%
- Lactic acid 20%
- Vegetable oils
- Xylene

**CONSUMPTION**

| Coating System | Product | Consumption |
|---|---|---|
| Primer | **DRI-FLOOR EP 1000** | 0.2 – 0.3 kg/m$^2$ |
| Epoxy mortar layer | **DRI-FLOOR MT 1000** (5mm thickness) | 11.0 kg/m$^2$ (2.2kg/m$^2$ per mm) |
| Chemical resistant lining | **DRI-FLOOR EP 1800** | 1.67 kg/m$^2$ per mm<br>(Thickness required is dependent on the floor requirement) |

❖ Actual consumption may vary due to application technique, surface porosity, surface profile, variation in level, wastage, and so on.

**SUBSTRATE**

Concrete

New concrete should be cured for at least 28 days and should have a pull-off strength ≥ 1.5 N/mm$^2$. Cement or mineral based substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and to achieve an open textured surface. Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed. Substrate must have sufficient gradient for surface water to run off easily without ponding water. All blow holes and imperfections should be filled with a suitable DRI-PATCH product.

Steel

All surfaces should be grit blasted to meet the requirements of BS4232, First Quality. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before formation of rust or scale.

**MIXING**

The resin should be thoroughly mixed with the hardener in the exact ratios to ensure optimum performance. The entire contents of the hardener can should be added to the base container and mixed until a uniform colour and consistency is obtained, taking into consideration to scrape the sides and bottom of the container. It is highly recommended that mechanical mixing be employed using a Jiffy mixer on a slow speed electrical drill.

**APPLICATION**

**DRI-FLOOR EP 1800** should be applied immediately to the prepared surface after mixing. A continuous coating of uniform thickness should be ensured.

Stiff nylon brush or short nap rollers are recommended for such application. Faster rate of application is possible using airless spray equipment.

To re-coat, it is crucial that the second coat be applied within the specified over-coating time.

**DRI-FLOOR EP 1800** should be removed from tools and equipment with a suitable solvent immediately after use. Cured materials can only be removed mechanically.

**LIMITATIONS**

❖ Substrate, ambient and product temperature must remain above 15$^o$C during application and curing. Min. material/container temperature for spray application is 20$^o$C. Avoid moisture contamination.

❖ **DRI-FLOOR EP 1800** should not be applied on surfaces that are known to or likely to suffer from rising dampness, potential osmosis problems or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A, or by a Thermo Hygrometer.

❖ Application should not be undertaken if the temperature is below 5$^o$C, or is 5$^o$C and falling, nor when the prevailing relative humidity exceeds 90%.

❖ **DRI-FLOOR EP 1800** may not be colour stable when in contact with some chemicals or direct sunlight. The colour change does not affect the performance of the protective system on either concrete or steel.

**HEALTH & SAFETY**

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

**LEGAL NOTE**

The information, and, in particular, the recommendations relating to the application and end-use of these products, are given in good faith based on current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance to the manufacturer recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. The manufacturer reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.