cemseal®

*Technical Data Sheet*

# CEMSEAL EPOFLOR ECO-WB

## SMOOTH WATER-BASED EPOXY COATING SYSTEM

### SYSTEM DESCRIPTION

**CEMSEAL EPOFLOR ECO-WB** is a high-performance water-based epoxy coating system available in three variants: standard breathable, high-adhesion, and heavy-duty mortar systems, designed to provide seamless, satin or semi-gloss finishes for interior concrete floors. It produces a dense, oil-resistant, anti-dust surface with excellent adhesion and vapour permeability. The system combines outstanding mechanical strength, chemical resistance, and environmental friendliness, making it ideal for light-to medium-duty industrial and commercial areas. The heavy-duty HD variant incorporates up to 5 mm epoxy mortar for enhanced durability in high-traffic and equipment-loading zones.

### KEY FEATURES AND BENEFITS

- Low VOC, solvent-free, and odour-free application
- Outstanding chemical, mechanical, and abrasion resistance
- Highly breathable to safely dissipate moisture without blistering
- Cures to an attractive, easy-to-clean silky matt finish with excellent colour stability
- Environmentally preferred option, fully certified by Singapore Green Label and HACCP International
- HD variant provides up to 5 mm thickness for heavy-duty load-bearing performance

### RECOMMENDED APPLICATION AREA

- Warehouse offices and storage areas (light-to-medium duty)
- Production facilities and assembly lines
- Workshops and maintenance rooms
- Mechanical rooms and electrical substations
- Corridors, walkways and plant rooms
- Hygienic environments including food processing areas and laboratories
- High-traffic corridors and forklift aisles
- Equipment-loading zones and heavy machinery areas
- Heavy-duty manufacturing and industrial facilities

### SYSTEM BUILD-UP

**CEMSEAL EPOFLOR ECO-WB** can be customized based on specific site conditions and applications.

| **Option 1: The Breathable System** | | |
|---|---|---|
| **Layer** | **Description** | **Product** |
| 1 | Primer | 1 coat CEMSEAL E100WB (Diluted with 5% water) |
| 2 | Body Coat | 1 coat CEMSEAL E100WB (Undiluted) |
| 3 | Topcoat | 1 coat CEMSEAL E100WB (Undiluted) |

| **Option 2: The High-Adhesion System** | | |
|---|---|---|
| **Layer** | **Description** | **Product** |
| 1 | Primer | 1 coat CEMSEAL P100SLF |
| 2 | Body Coat | 1 coat CEMSEAL E100WB (Undiluted) |
| 3 | Topcoat | 1 coat CEMSEAL E100WB (Undiluted) |

| **Option 3: The Heavy-Duty (HD) System** | | |
|---|---|---|
| **Layer** | **Description** | **Product** |
| 1 | Primer | 1 coat CEMSEAL P100SLF |
| 2 | Epoxy Mortar | CEMSEAL 500SL (up to 5mm thickness) |
| 3 | Seal Coat | 1 - 2 coats CEMSEAL E100SL + 2% QUARTZ T1 |
| 4 | Body Coat | 1 coat CEMSEAL E100WB (Undiluted) |
| 5 | Topcoat | 1 coat CEMSEAL E100WB (Undiluted) |

### TECHNICAL PROPERTIES

| **Properties** | **Test Method** | **Typical Value** |
|---|---|---|
| Adhesion Strength | ASTM D4541 | ≥ 1.5 N/mm$^2$ |
| Shore D Hardness | ASTM D2240 | > 60 |
| Abrasion Resistance | ASTM D4060 | < 0.1 g loss (CS17 wheel / 1000 cycles) |
| Slip Resistance* | BS 7976-2 (Typical values for 4-S rubber slider) | Dry ≥ 40, Wet depend on specification (in accordance with HSE and UKSRG guidelines) |

*The slipperiness of flooring materials can change significantly due to the installation process, after short periods of use, due to inappropriate maintenance, longer-term wear and/or surface contaminants (wet or dry). Textured systems are recommended to meet slip resistance requirements for wet conditions and/or surface contaminants.

## SYSTEM CURING & OVERCOATING*

| Curing Stage | Time (@ +30°C) |
|---|---|
| Foot Traffic | ~12 Hours |
| Light Traffic | ~2 Days |
| Full Mechanical & Chemical Cure | 5 Days |

*System curing times are highly dependent on ambient conditions. High humidity or poor ventilation will significantly delay water evaporation and extend the required wait times.

## SUBSTRATE QUALITY & REQUIREMENTS

- The concrete substrate must be structurally sound, at least 28 days old, with a minimum compressive strength of 25 N/mm² and a pull-off strength of at least 1.5 N/mm².
- Substrate surface moisture must be strictly ≤ 6% (measured by Tramex CM Method) when utilizing the Breathable System (E100WB diluted primer).
- Substrate surface moisture must be strictly ≤ 4% (measured by Tramex CM Method) when utilizing the High-Adhesion System (P100SLF primer) or Heavy-Duty HD System.
- The surface must be perfectly clean, dry, and entirely free from oil, grease, curing agents, and friable materials.
- Mechanical surface preparation via abrasive blast cleaning or diamond grinding is mandatory to remove cement laitance and achieve a properly open-textured profile. All dust must be thoroughly vacuumed prior to priming.

## APPLICATION CONDITIONS & LIMITATIONS

| Parameter | Requirement |
|---|---|
| Ambient Temperature | +10°C to +35°C |
| Substrate Temperature | +10°C to +35°C ; ≥ 3°C above dew point |
| Relative Humidity | ≤ 80% |

## IMPORTANT NOTES

- Ensure the substrate is dry, sound, and properly prepared, and do not apply the system where rising moisture or hydrostatic pressure is present.
- Maintain substrate temperature at least 3 °C above the dew point and protect freshly applied coatings from moisture and condensation for a minimum of 24 hours.
- Treat all cracks appropriately before coating, ensuring static cracks are filled and dynamic cracks are detailed according to best practice.
- Use consistent material batch numbers within each application area to achieve uniform colour and appearance.
- Avoid application under extreme environmental conditions such as direct sunlight, very high substrate temperature, or strong wind.
- Ensure adequate ventilation during the application and curing of all flooring systems to prevent moisture buildup, condensation, and surface defects.
- Respect the recommended overcoating intervals to avoid adhesion issues, trapped moisture, or surface defects.
- Do not expose the system to heavy loads or traffic until full curing has been achieved based on the specified curing schedule.
- For HD system applications, apply epoxy mortar in uniform thickness and ensure proper trowelling to achieve a smooth, level surface before proceeding to subsequent coats.

## INSTALLATION SERVICE

Installation shall be carried out by CEMSEAL-approved and trained applicators in accordance with CEMSEAL's documented quality assurance procedures and surface preparation guidelines.

**Disclaimer:**
**The information and any recommendations relating to the application and end-use of all CEMSEAL products are provided in good faith based on CEMSEAL's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by CEMSEAL. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions. All users should always refer to the most recent and up to date issue of the Technical Data Sheet for the product concerned, which is available on request. It is recommended that products should always be properly stored, handled and applied under tested and recommended conditions.**

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