cemseal®

Technical Data Sheet

CEMSEAL E100SL

HIGH-PERFORMANCE PIGMENTED EPOXY COATING

DESCRIPTION

CEMSEAL E100SL is a two-component, high-performance pigmented epoxy coating. Formulated as a tough, wear-resistant body coat, it provides a durable, seamless finish and is versatile enough to be applied by roller, brush, or spray. Its high-solid structure offers exceptional compressive strength and excellent resistance to abrasion, making it ideal for industrial floors subjected to heavy mechanical loads.

FEATURES AND BENEFITS

- Cures to a smooth, high-gloss and easy-to-clean finish
- Excellent compressive strength and abrasion resistance
- Strong monolithic bond prevents delamination
- Superior resistance to mechanical impact and shock
- Extended pot life allows for easy application by various methods

RECOMMENDED USES

Suitable for use as a body coat or topcoat on:

- Industrial flooring in manufacturing plants, workshops, and assembly lines
- Warehouses and logistics hubs requiring high wear resistance
- Laboratories, clean rooms, and pharmaceutical facilities
- Car parks, plant rooms, and heavy-duty loading bays

PRODUCT INFORMATION

Packaging	Part A : 16kg pail Part B : 4kg pail Part A + B : 20kg set
Appearance	Part A : Coloured Liquid Part B : Transparent Liquid
Chemical Base	Epoxy Resin
Specific Gravity	1.39 ± 0.05

TECHNICAL PROPERTIES

Properties	Test Method	Typical Value
Adhesion to concrete	BS EN 1542	> 2.0 N/mm² (Failure in Concrete)
Shore D Hardness	ASTM D2240	≥ 78
Compressive Strength	ASTM C579	≥ 65 N/mm²
Flexural Strength	BS EN 13892-2	≥ 40 N/mm²
Abrasion Resistance	ASTM D4060	< 0.1 g loss (CS17 wheel / 1000 cycles)
Impact Resistance	BS EN ISO 6272-1	≥ 20 Nm (Class III - High Impact)
Slip Resistance*	BS 7976-2 (Typical values for 4-S rubber slider)	Dry > 40, Wet depends 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.

APPLICATION INFORMATION

Ambient Temperature	+10°C min. / +35°C max.
Substrate Temperature	+10°C min. / +35°C max.
Relative Humidity	Maximum 80%
Dew Point	Substrate temperature must be at least +3°C above the dew point.
Substrate Moisture Content	≤ 4.0% pbw (measured by Tramex CM Method).
Pot Life (at 25°C)	~60 minutes
Mixing Ratio	Part A : Part B = 4 : 1 (by weight)
Consumption	0.30 - 0.70 kg/m² per coat (Depending on type of application)
Drying Time	Surface Dry: 5 hours Tack Free: 8 hours Full Dry: > 12 hours
Waiting Time / Overcoating	Min: 12 hours Max: 48 hours

SUBSTRATE REQUIREMENTS & PREPARATION

- The surface must be clean, sound, dry, and free from contaminants such as dirt, oil, grease, coatings, and surface treatments.
- The concrete substrate must possess sufficient compressive strength (min. 25 N/mm²) and a minimum pull-off strength of 1.5 N/mm².
- Surfaces should be prepared mechanically using abrasive blast cleaning or diamond grinding to remove cement laitance and achieve an open-textured surface.
- Substrate moisture content must be less than 4% pbw when measured using the Tramex CM Method, and free from rising moisture.
- All dust and loose material must be thoroughly removed via vacuum before application.
- The substrate must be primed with CEMSEAL P100SL or CEMSEAL P100SLF to seal pores and ensure maximum adhesion of the body coat. Ensure the primer is tack-free and within the overcoating window (12-48 hours) before applying CEMSEAL E100SL.

MIXING

1. Stir Part A (Resin) thoroughly to ensure color uniformity and disperse settled fillers.
2. Add Part B (Hardener) to Part A.
3. Mix continuously for approximately 3 minutes using a low-speed electric mixer (300-400 rpm) until a uniform color and consistency are achieved.
4. Scrape the sides and bottom of the mixing container with a flat-edge trowel to ensure complete mixing, while avoiding excessive mixing to prevent air entrapment.

APPLICATION METHOD

1. Roller/Brush: Pour the mixed material onto the substrate and spread evenly using a short-pile or medium-pile roller. Use a brush for corners and edges. Apply in a cross-hatch pattern to ensure uniform coverage.
2. Spray: The product can be applied using suitable airless spray equipment. Adjust pressure and nozzle size according to equipment specifications to achieve a uniform film.
3. Maintain a "wet edge" at all times to avoid lap marks.
4. If a non-slip finish is required, anti-slip aggregates can be broadcast into the wet coat, followed by a subsequent top seal coat.

CLEANING OF TOOLS

Clean all tools and application equipment with an approved solvent thinner immediately after use. Hardened or cured material can only be removed mechanically.

IMPORTANT CONSIDERATIONS

- The product is supplied ready for use and must not be diluted with solvents, water, or thinners, as this will affect the curing process and final properties.
- Partial quantities of Component A and Component B must not be mixed, as improper weighing can lead to mixing errors and incomplete curing.
- Ensure that all packs used in the same area are from the same batch number to prevent slight color variations.
- Like all standard epoxies, this product may yellow or chalk upon prolonged exposure to direct UV light, although this does not affect its mechanical integrity.
- The substrate and ambient temperature must be maintained at least 3°C above the dew point to reduce the risk of condensation or blooming on the floor finish.
- The maximum relative humidity during application and curing should not exceed 80%.
- Application must not be carried out on substrates with a moisture content higher than 4% (Tramex CM Method) or on surfaces subject to rising damp. If the moisture content exceeds 4%, it is recommended to install CEMSEAL MB200BC (Moisture Barrier).
- The newly applied material must be protected from damp, condensation, and direct water contact for at least 24 hours.
- The product generates heat after mixing, so it must be applied immediately and the mixed container should not be left unguarded.
- The maximum waiting time between coats must be respected; if the coating is left for more than 48 hours, the surface must be mechanically sanded to create a profile before applying the next coat.

STORAGE AND SHELF LIFE

Storage: CEMSEAL E100SL should be stored in the original manufacturer's packaging in a shaded, cool, and dry place. Storage temperature should be between +5°C and +30°C. Keep at least 2 meters away from direct heat sources.
Shelf Life: Expected 24 months shelf life with the above-mentioned storage conditions.

HEALTH & SAFETY

The user must refer to the latest version of the Safety Data Sheet (SDS) for comprehensive information on the safe handling, storage, and disposal of this chemical product. The SDS contains essential physical, ecological, and toxicological data required for professional use.

BASIS OF TECHNICAL DATA

All technical data provided in this Technical Data Sheet are based on laboratory tests. Actual performance may vary due to factors beyond our control.

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.

For More Information:

CEMSEAL INDUSTRIES SDN. BHD. (884153-T)
Corporate Office: No. 10, Jalan Emas 29, Taman Sri Putri, 81300 Skudai, Johor, Malaysia.
Factory: No. 68, Jalan Perniagaan Setia 6, Taman Perniagaan Setia, Setia Business Park II, 81100 Johor Bahru, Malaysia.
Website: www.cemseal.com Email: info@cemseal.com

QMS - 005 100 19013
EMS - 005 104 19005
QMS - 44 100 19 92 0012
EMS - 44 104 19 92 0012