cemseal®

Technical Data Sheet

CEMSEAL P100SL

HIGH-PERFORMANCE PENETRATIVE EPOXY PRIMER

DESCRIPTION

CEMSEAL P100SL is a two-component, high-performance epoxy primer with an optimized viscosity for concrete surface consolidation. It is engineered to penetrate deep into capillaries while maintaining a sufficient film build to act as an effective moisture vapor control layer. It consolidates the surface, creating a robust mechanical anchor and protecting subsequent flooring systems from osmotic blistering caused by moderate vapor drive.

FEATURES AND BENEFITS

- Tested to ASTM E96 standards to reduce moisture vapor transmission and minimize the risk of outgassing.
- Balanced viscosity ensures deep substrate absorption while maintaining a continuous surface seal.
- Creates a strong chemical and mechanical bond that exceeds the cohesive strength of the concrete itself.
- Provides effective sealing with minimal shrinkage during the curing process.
- Reinforces weak or porous concrete surfaces by filling capillaries and voids.

RECOMMENDED USES

Suitable for new and existing surfaces:

- Priming of porous concrete and cementitious screeds to reduce outgassing.
- Base coat for industrial flooring systems in warehouses, factories, and car parks.
- Moisture management for slabs with moderate vapor transmission.
- Surface sealer and dust-proofer for concrete floors.
- Adhesion promoter for epoxy and PU coating systems.

PRODUCT INFORMATION

Packaging	Part A : 20kg pail Part B : 10kg pail Part A + B : 30kg set
Appearance	Part A : Clear Liquid Part B : Transparent Liquid
Chemical Base	Epoxy Resin
Specific Gravity	1.08 ± 0.05

TECHNICAL PROPERTIES

Properties	Test Method	Typical Value
Mixed Viscosity	ASTM D2196	< 500 mPas
Adhesion to concrete	BS EN 1542	> 2.0 N/mm^2 (Failure in Concrete)
Shore D Hardness	ASTM D2240	≥ 78
Compressive Strength	ASTM C579	≥ 50 N/mm^2
Water Vapor Transmission	ASTM E96/ E96M-24a	Class II Vapor Retarder
Water Vapor Permeance	ASTM E96/ E96M-24a	Class II Vapor Retarder

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/mm^2) and a minimum pull-off strength of 1.5 N/mm^2.
- 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.

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)	~40 minutes
Mixing Ratio	Part A : Part B = 2 : 1 (by weight)
Consumption*	0.15 - 0.20 kg/m^2 per coat
Drying Time	Surface Dry: 4-5 hours Tack Free: 8 hours Full Dry: > 12 hours
Waiting Time / Overcoating	Min: 12 hours Max: 48 hours

*Actual consumption depends on substrate porosity and texture

MIXING

1. Stir Part A (Resin) briefly.
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, clear mixture is 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. Pour the mixed CEMSEAL P100SL onto the prepared substrate.
2. Spread evenly using a short-pile roller or squeegee, ensuring the product is worked well into the surface pores.
3. Avoid ponding of the material. If "dry spots" appear (indicating high absorption), apply a second coat while the first is still tacky or within the overcoating window.
4. If a mechanical key is required for the subsequent layer, broadcast quartz sand (0.3-0.8 mm) into the wet primer after waiting 15-30 minutes.

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.
- 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 P100SL 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:

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