cemseal®

Technical Data Sheet

CEMSEAL E200PU-M

FOUR-COMPONENT SOLVENT-FREE POLYURETHANE SCREED

SYSTEM DESCRIPTION

CEMSEAL E200PU-M is a high-performance, four-component, solvent-free, colored polyurethane screed designed for heavy-duty industrial flooring applications. Applied by trowel at 3-6 mm thickness, this system delivers exceptional chemical resistance, thermal stability, and mechanical durability for the most demanding environments. It provides a seamless, easy-to-clean matte finish that withstands constant exposure to aggressive chemicals, high-temperature cleaning, and heavy vehicular traffic.

KEY FEATURES AND BENEFITS

- Excellent resistance to common industrial chemicals
- Performs reliably across a broad temperature range
- Withstands heavy abrasion and impact loads
- Seamless finish simplifies cleaning and maintenance
- Cures quickly to reduce operational downtime
- Provides effective antimicrobial protection
- Solvent-free formulation eliminates fire hazards
- Low VOC emissions ensure safe indoor use

RECOMMENDED USES

CEMSEAL E200PU-M is specifically engineered for applications requiring constant resistance to aggressive chemicals, high-temperature cleaning, and severe mechanical stresses. It is ideal for :

- Food and beverage production facilities
- Dairy processing plants
- Pharmaceutical manufacturing areas
- Warehouse and distribution centers
- Chemical and minerals processing plants
- Wastewater treatment facilities
- Commercial kitchens and food preparation areas
- Heavy industrial manufacturing floors

PRODUCT INFORMATION

Packaging	20.175 kg set Part A : 3 kg bottle Part B : 3 kg bottle Part C : 14 kg bag Part D : 0.175 kg sachet)
Appearance	Part A : Milky Liquid Part B : Amber Liquid Part C : Filler Part D : Coloured Liquid
Chemical Base	Polyurethane Cement Hybrid
Specific Gravity (mixed)	1.89 ± 0.05

TECHNICAL PROPERTIES

Properties	Test Method	Typical Value
Adhesion Strength	ASTM D4541	≥ 1.5 N/mm²
Compressive Strength	EN 13892-2	> 50 N/mm²
Flexural Strength	EN 13892-2	≥ 15 N/mm²
Shore D Hardness	ASTM D2240	> 75
Abrasion Resistance	ASTM D4060	0.1 g loss (1 kg load, 1000 cycles,CS17 wheels)
Impact Resistance	EN ISO 6272	≥ 15 Nm
Fire Resistance	EN 13501-1	B_{fl}-s1
Slip Resistance	BS 7976-2 (4S rubber slider)	Dry > 38
Service Temperature		-5°C to +70°C @ 3 mm thickness -10°C to +80°C @ 4 mm thickness -15°C to +90°C @ 5 mm thickness

SUBSTRATE REQUIREMENTS & PREPARATION

- The surface must be clean, sound, dry, and free from contaminants such as dirt, oil, grease, coatings, and surface treatments.
- New concrete must cure for a minimum of 28 days before application.
- Concrete substrates must have a minimum compressive strength of 25 N/mm² and a minimum pull-off strength of 1.5 N/mm².
- All surfaces must be mechanically prepared using diamond grinding or shot blasting to remove cement laitance and achieve an open-textured surface with a profile of CSP 3-5.
- Cut grooves with a minimum width and depth equal to twice the applied screed thickness along all edges, drains, columns, and expansion joints in the designated application area.
- Repair all surface defects, cracks, blowholes and voids using appropriate Cemseal repair products.
- All dust and loose material must be thoroughly removed via vacuum before application.

APPLICATION CONDITIONS

Parameter	Requirement
Ambient Temperature	+10°C to +30°C
Substrate Temperature	+10°C to +30°C
Product Temperature	+18 °C to +25 °C
Relative Humidity	Maximum 80%
Dew Point	Substrate temperature must be at least +3°C above the dew point
Mixing Ratio	Part A : Part B : Part C : Part D = 3 : 3 : 14 : 0.175 (by weight)
Consumption*	1.9 kg/m² per mm thickness 5.7-7.6 kg/m² for 3-4 mm thickness
Pot Life (+ 25°C)	20-24 minutes
Drying Time (+ 25°C)	Light foot traffic : 18-24 hours Normal traffic : 3 days Full chemical resistance : 7 days
Waiting Time / Overcoating (+ 25°C)	12-24 hours (no grinding required) >24 hours: light grinding required

MIXING

1. Ensure all components are at room temperature (18-25°C) before mixing.
2. Add the entire contents of the Color Paste to Part A.
3. Mix using a helical mixer at 300-500 rpm for approximately 30 seconds until the color is uniformly dispersed.
4. Add the entire contents of Part B to the mixture and continue mixing for 30 seconds until consistent.
5. While the mixer is running, gradually add Part C, moving the mixer from side to side and top to bottom to ensure thorough mixing. Scrape the sides and bottom of the container frequently during this step (~2 minutes total).
6. Transfer the entire mixture to a new, clean container and mix for an additional 1 minute to ensure complete homogenization if required.
7. Do not mix partial batches as this will result in incorrect ratios and compromised performance.

APPLICATION METHOD

Scratch Coat Application

1. Apply a 1mm thick scratch coat of CEMSEAL E200PU-M using a trowel on the prepared surface.
2. For porous or poor-quality substrates, apply a second layer of scratch coat.
3. Allow the scratch coat to dry.

Body Coat Application

1. Pour the freshly mixed material onto the primed floor immediately after mixing.
2. Spread evenly to the required thickness using a pin rake or notched trowel.
3. Maintain continuity between pours (maximum 5-6 minutes interval) to avoid cold joints.
4. Finish using a hand troweling method to achieve a smooth, uniform surface.
5. Ensure proper ventilation during application and curing.
6. Protect the newly applied surface from direct sunlight, draughts and water contact for the first 24 hours.

CLEANING OF TOOLS

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

IMPORTANT NOTES

- Do not dilute the product with water or solvents as this will affect curing and final performance.
- Do not apply if rain is expected within 24 hours.
- Avoid excessive mixing speeds to prevent air entrainment, which can cause pinholes and bubbles in the finished surface.
- Ensure all mixing containers and tools are clean and dry before use.
- The product generates heat during curing; do not leave mixed material in closed containers unattended.
- For areas requiring enhanced slip resistance, consult Cemseal Technical Service for appropriate aggregate broadcasting recommendations.
- All expansion and construction joints in the substrate must be reflected through the finished flooring system.
- If the maximum overcoating time is exceeded, the surface must be lightly grinded and thoroughly cleaned before applying additional coats.
- Partial quantities of components must not be mixed as improper ratios will result in incomplete curing and reduced performance.

STORAGE AND SHELF LIFE

Storage: CEMSEAL E200PU-M should be stored in the original manufacturer's packaging in a shaded, cool, and dry place. Storage temperature should be between +10°C and +25°C. Keep at least 2 meters away from direct heat sources.

Shelf Life : Expected 9 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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