Quality Needs Quality

Kemcrete PU

Ultra Heavy Duty Polyurethane - Cement Self Smoothing Mortar Floor Screed

Description	**Kemcrete PU** is three components Polyurethane with a very special cement binder, performs self-smoothing mortar screed, designed to be applied in thickness of 3 - 6 mm. It is ultra-heavy duty, wear and abrasion resistant, and resists temperature between -25 °C up to 80 °C. The material is hygienic and chemical resistant
Where to use	**Kemcrete PU** floor find their widest use in the following: • Food & beverage industries • Pharmaceutical & medical industries • Hospitals & laboratories • Chemicals industries • Cold stores & freezers
Advantages	• Fast hardening • Slip resistant & easy to clean • Freeze / thaw resistant -25° C • Heat resistant up to 80 °C hot oils and water vapor • Non –Tainting, non-dusting • Nontoxic, antimicrobial • impermeable to liquids • High wear and abrasion resistance • High resistance to impact • Withstands high mechanical stress • Chemical resistant to most alkalis , acids and solvents including (100% lactic acid, 100% oleic acid, 100% methanol, conc. Citric acid, hot oils, sugar and boiled water)

Properties

Samples cured for 7 days and tests at 23 °C and R.H. 50 – 60%

Color	Default grey	Different shades of grey are available
Density	1.8 ±0.2 Kg/L	
Pot life @20°C	15 - 20 minutes	
Fully cured	4 Days	
Compressive strength	45 - 50 N/mm²	
Temperature Resistance System thickness 3 - 4 mm System thickness 5 mm System thickness 6 mm	 - 15 °C / + 60 °C - 20 °C / + 70 °C - 25 °C / + 80 °C	
Tensile strength	7 - 8 N/mm²	
Flexural strength	17 - 19 N/mm²	
Adhesion strength	Concrete failure	

Surface Preparation	**For new poured concrete:** • Allow to fully cure 28 days prior to application – allowed after 7 days in case concrete reached to a compressive of 25 N/mm² • Remove any curing membrane by sanding and remove the etching with a strong detergent • The compression strength should not be less than 25 N/mm² and the tensile strength is at 1.5 N/mm² **For old concrete:** • Thoroughly clean the surface with a grease-cutting detergent to remove grease and Oils, and remove any loose or unsound concrete by chipping, scarifying, shot blasting, sanding or grinding, then proceed as for newly poured concrete **Previously coated concrete:** • Remove any peeling or degraded paint by sanding or using a paint stripper • For intact paint, thoroughly clean the surface with a strong detergent, then lightly sand to remove any gloss • Treat any areas worn down to the original concrete as bare concrete • All damaged areas, cracks and surface irregularities must be repaired and smoothened first by using **Kemrepair EP** and bonding layer using **Kembond EP**, or by making a scratch coat using Sealer E43 and filled possibly with **Kemfloor Aggregate #2** to be spread over using a prober squeegee **Anchor groove** • Termination grooves are nominally square in section with each side twice the thickness of the floor • Termination grooves must be present in the surface of the concrete within 75 mm of all free edges • Free edges include all joints, column bases, perimeter walls, drainage channels, door thresholds • Control Joints are also required wherever movement is expected including adjacent to stainless steel channels, machine bases, around columns and at any construction joint in the substrate **Expansion joints:** • Shall be installed in accordance with local building codes • Never bridge an expansion, contraction or construction joint
Priming	• Prime the prepared concrete substrate using **Sealer E45** at a coverage rate 0.2 – 0.25 Kg/m² • Mix components A and B together using a slow speed drill and paddle until it is streak free • Using a paint brush or medium pile paint roller, apply the mixed primer to the prepared substrate • If the concrete absorbs the primer, leaving the surface matt instead of glossy, the surface should be re-primed • For green concrete or wet concrete moisture content >4% use **Wetseal** at a coverage rate of 0.2 - 0.25 Kg/m² • Scatter **Kemfloor Aggregates** #3 over the wet primer and leave it over night to dry • Swipe the loose aggregates on the next day and make sure the surface is cleaned • The scratch coat should be checked for any pinholes and make sure the surface is touch to dry before applying subsequent layers and perfectly sealed • Scratch coat should not be left for more than 48 hours, or else a mechanical preparation will be required
Mixing	It is important to remember that this coating has a limited pot life of 15 - 20 minutes, therefore, it is wise to check and make sure everything is in order before starting the mixing sequence • Mix the **Kemcrete PU** components **part A** and **part B** together for 1 minute with a slow speed drill and paddle (300 – 350 rpm) to create a uniform dispersion • The mixed material should then be transferred into a suitable mixing container and then gradually add the **part C** whilst mixing continues for typically 3 – 4 minutes • Only whole units are to be mixed • Transport and discharge the mixed material on to the substrate as quickly as possible

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Application	• Pour all of the mixed **Kemcrete PU** on to the floor immediately after mixing and spread by steel trowel to the desired thickness • All termination and anchor grooves cut in the concrete should be filled with the **Kemcrete PU** • Lightly use a spiked roller to assist flow and to release any trapped air • To ensure an even finish, the troweling and spike roller should be completed before the mix is more than 10 minutes' old • Allow 24 hours before light traffic
Cleaning	• Cleaning all tools and equipment immediately after use with **Prosolve PU**
Limitation	• Expansion joints in the existing substrate should be continued through **Kemcrete PU** and filled to the required level with a suitable sealant from **Proflex®** range • Substrate temperature must be at least 3°C above the dew point • Relative humidity of the air must be lower than 80% • The ambient temperature must be between +10 °C and +30 °C
Theoretical Coverage	• Primer **Sealer E45** for dry concrete and **Wetseal** for green concrete at coverage rate of 0.2 - 0.25 Kg/m² depending on substrate porosity • Top coat **Kemcrete PU**: 5.4 Kg / m^2 / 3 mm thickness Where 1.8 Kg for each 1 mm without wastage and on even substrates
Packaging	Part (A+B+C) 10 Kg
Shelf life & storage	12 months if stored in unopened containers in cool, dry condition
Health and Safety	• Use gloves and a breathing mask when applying • Apply forced ventilation in confined spaces • Skin splashes to be removed with hand cleanser, soap, and water • Eye splashes are to be removed with plenty of water • If ingested seek medical advice
Additional Information	**PROKEM** provides the construction industry with a comprehensive range of construction chemicals and specialty products answering the queries of modern engineers for trouble free durable structures **PROKEM** designs tailor made products should there be a critical application that requires specific properties rather than our main range. For our customer's satisfaction **PROKEM** reserves the right to change the properties of its products All orders are accepted subject to our current terms of sale & 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 **PROKEM** extends technical services to include after sales support to assist users in the proper handling of our products