

## TUFFCEM 101 3K Epoxy Cementitious Concrete (ECC) Flooring

Technical Data Sheet Edition : 01-May-21

VER: 04

PRODUCT DESCRIPTION	TUFFCEM 101 is a three part, epoxy cementitious concrete (ECC), fine textured mortar for self-smoothing floor screeds in thin layers of 1.5 to 3 mm.
WHERE TO USE	As a Temporary Moisture Barrier (TMB) under Epoxy, Polyurethane floors, over high moisture content substrates, can be used even on green concrete.
CHARACTERISTICS/ ADVANTAGES	Prevents osmotic blistering of resin based coatings over damp substrates  Economical and fast, easy application.  Good levelling properties  Impervious to liquids but permeable to water vapour.  Frost and de-icing salt resistant.  Good chemical resistance.  Thermal expansion properties similar to concrete.  Excellent bond to green or hardened concrete whether damp or dry.  Excellent early and final mechanical strengths.  Excellent resistance to water and oils.  Contains no solvents.  Does not corrode reinforcement steel.
APPEARANCE / COLOUR	Part A – Resin : Light Pale / White, Liquid Part B – Hardener : Translucent Yellowish/ Brown Liquid Part C- Filler:-Grey Aggregate Powder Colour:- Grey Finish:-Matt
PACKAGING	Set Packaging
STORAGE / SHELF LIFE	24 months from date of production if stored in original, unopened and undamaged Sealed packaging, in dry conditions at temperatures between +5°C and +35°C.
CHEMICAL BASE	Epoxy Cementitious Concrete
DENSITY	Mixed: ~1.8 g/cc
	MECHANICAL / PHYSICAL PROPERTIES
ABRASION RESISTANCE	90 mg weight loss (wheel cs 17, 1 kg load, 1000 cycles)
COMPRESSIVE STRENGTH	~ 50 Mpa (Astm D 695)
FLEXURAL RESISTANCE	~ 20 Mpa (Astm D 790)
TENSILE STRENGTH	~ 12 MPa (ASTM D 882)
SHORE HARDNESS D	70
ADHESION	~ 8.6 MPa (ASTM D 4541)
ADITESION	
	APPLICATION DETAILS
CONSUMPTION	TUFFCEM 101 ~ 1.8 kg/m2/ @ 1mm
/DOSAGE	~ 3.6 kg/ m2 for a 2 mm thick application.
SUBSTRATE QUALITY	The concrete substrate must be sound and of sufficient compressive Strength (minimum 25 N/mm2) with a minimum pull off strength of 1.5 N/mm2. The substrate must be free of all contaminants such as oil, grease, coatings and surface treatments etc. If in doubt, apply a test area first.
SUBSTRATE	Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying
PREPARATION	equipment to remove cement laitance and achieve an open textured surface. Weak concrete must be removed and surface defects such as blow holes and voids must be fully exposed. Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate Jemkon products.
SUBSTRATE	+8°C min. / +35°C max.
TEMPERATURE	

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NAIVING.	Stir Component A (Pacin) and C	omponent B /Ua	rdnor) first ind	ividually for approx 15 coconds		
MIXING	Stir Component A (Resin) and Component B (Hardner) first individually for approx. 15 seconds to remove any settling. Take A (Resin) and B (Hardner) and mix for approx. 1 minute with low speed mixer until homogeneous. Finally add Component C (Filler) and further mix for 2 minutes until the mixture is homogeneous and the material is uniformly dispersed. Only mix the required quantity for application as per ratio given on the container.					
	Over mixing must be avoided to minimise air entrainment.  Use a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.					
APPLICATION PROCESS	Pour the mixed TUFFCEM 101 o	nto the primed s	substrate and s	pread evenly to the spatula and		
& TOOLS	required thickness uniformly with a rubber or metal trowel & immediately roll with a spi					
	roller to remove entrapped air and obtain an even thickness layer.					
	Do not use additional water, which would disturb the surface finish and cause discolouration.  A seamless finish can be achieved if a wet edge is maintained during application.					
RECOMMENDED	Primer: : JEMFLOR AQ 50/ Tuffcem 50					
UNDERCOATS &	Screed: TUFFCEM 101 /102 /103 (48 hours curing required)					
OVERCOATS	Sealer : Tech 24 / Tech 60  Top coat : Tech SL / Tech FC / Aquathane flooring series					
CLEANING OF TOOLS	Clean all tools and application ed		- 	ediately after use.		
	CURING	DETAILS				
POT LIFE	Temperatures		Time			
	+25°C		~ 20 min	utes		
WAITING	Temperatures	Minimum		Maximum		
TIME/OVERCOATING	+25°C	48 Hours		96 Hours		
	Moisture percentage should be <5% before application of any Epoxy/ PU flooring.  (Optional) Light sanding advised after maximum time.					
APPLIED PRODUCT	Temperatures	Minimum		Maximum		
READY FOR USE	+25°C	~ 48 Hours		-		
	Times are approximate & will be affected by changing ambient & substrate conditions.					
CLEANING/	Spillage of any kind should be cleaned quickly.					
MAINTENANCE	Use mild detergent & water to clean the coating regularly. Scrubbing can be done by using soft bristles.					
VALUE BASE	All technical data stated in this technical Data Sheet are based on laboratory tests.					
	Actual measured data may vary due to circumstances beyond our control.					
HEALTH AND SAFETY						
	users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.					
LEGAL NOTES	The information, and, in particular, the recommendations relating to the application and end-					
	use of Jemkon's products, are given in good faith based on Jemkon's current knowledge and					
	experience of the products when properly stored, handled and applied under normal conditions in accordance with Jemkon's recommendations. In practice, the differences in					
	materials, substrates and actual site conditions are such that no warranty in respect of					
	merchantability or of fitness for a particular purpose, nor any liability arising out of any legal					
	relationship whatsoever, can be inferred either from this information, or from any written					
	recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Jemkon reserves the right to					
	change the properties of its products. The proprietary rights of third parties must be observed.					
	All orders are accepted subject to our current terms of sale and delivery. Users must always					
	refer to the most recent issue of copies of which will be supplied	the local Technic				

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