TUFFCEM 101

3-Part Cement And Epoxy Combination Mortar For Self-Smoothing Floor Screeds Of 1.5 To 3 mm

Product Description

TUFFCEM 101 is a three part, epoxy modified cementitious, 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 and PMMA 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.
For internal or external use.
Contains no solvents.
Does not corrode reinforcement steel.

Appearance / Colour

Part A - resin:- clear, liquid
Part B - hardener: -amber to greenish liquid
Part C - Water – not supplied by Jemkon. (to be arranged by the client at site)
Part D- filler:-grey aggregate powder
Colour:- grey
Finish:-matt

Packaging

Set Packaging

Storage Conditions / Shelf Life

12 months from date of production if stored in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and +30°C.

JEMKON
ISO 9001:2008

Chemical Base	Epoxy modified cementitious mortar.
Density	mixed: ~2.0 g/cc

Mechanical / Physical Properties

Compressive Strength +23ºC / 50% r.h. (EN 13892-2)

1 day	~15 N/mm^2
7 days	~50 N/mm^2
28 days	~60 N/mm^2

Flexural Resistance +23ºC / 50% r.h. (EN 13892-2)

1 day	~ 5.8 N/mm^2
7 days	~ 11.1 N/mm^2
28 days	~ 14 N/mm^2

Abrasion Resistance	11.9 cm^3 / 50 cm^2 and 2.4 mm wear depth (Böhme abrasion)	(EN 13892-3)
Adhesion	4.1 N/mm^2 after 28 days at +20ºC and 50% r.h. (100% concrete failure)	(EN 13892-8)

Application Details

Consumption / Dosage	Self smoothing screed TUFFCEM 101 ~ 2.0 kg/m2/ @ 1mm ~ 4.0 kg/ m2 for a 2 mm thick application (minimum for T.M.B)
Substrate Quality	The concrete substrate must be sound and of sufficient compressive Strength (minimum 25 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2. The substrate can be damp but must be free of standing water and free of all contaminants such as oil, grease, coatings and surface treatments etc. If in doubt, apply a test area first.

Substrate Preparation	Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying 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. High spots can be removed by grinding. All dust & loose material must be completely removed from all surfaces before application of the product, preferably by brush or vacuum.
Substrate Temperature	+8°C min. / +30°C max.
Mixing	Prior to mixing, shake part A briefly until homogenous, then pour into container of part B and shake vigorously again for at least 30 seconds. When dosing out of drums, stir and homogenise first. Pour the mixed binder mixture (A+B) into a suitable mixing container (capacity of about 30 litres) and gradually add part C (water) slowly to the mixer while stirring with a power mixer. Mix (A+B+C) for another 30 seconds to 1 minute thoroughly & then gradually add D (Filler) & mix (A+B+C+D) for 2 to 3 minutes until a uniform mix has been achieved. Mix using a slow speed electric mixer (300 - 400 rpm) with helical paddle or other suitable equipment. Recommended are single or counter rotating double mortar (basket type) and forced action (pan type) mixers.
Application Process & Tools	Place mixed TUFFCEM 101 onto the primed substrate and spread evenly to the spatula and required thickness uniformly with a rubber or metal trowel & immediately roll with a spike roller to remove entrapped air and obtain an even thickness layer. Workability can be adjusted by varying slightly the amount of part D. 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 Undercoats & overcoats	Primer : JEMFLOR AQ 50 Screed : TUFFCEM 101 /102 /103 Sealer : TECH 24 / TECH 60 Top coat : TECH SL / TECH FC / AQUATHANE flooring series
Cleaning of Tools	Clean all tools and application equipment with water immediately after use.

Potlife

Temperatures	Time
+25℃	~ 15 minutes

Waiting Time / Overcoating

Before applying sealer coat on TUFFCEM 101 allow:

	Waiting time	
Substrate temperature	Minimum	Maximum
+25°C	48 hours	-

Curing Details

Applied Product ready for use

	Waiting time	
Substrate temperature	Minimum	Maximum
+25°C	48 hours	-

Note: Times are approximate and will be affected by changing Ambient and substrate conditions.

Cleaning/ Maintenance

Spillage of any kind should be cleaned quickly.
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

For information and advice on the safe handling, storage and disposal of chemical products, 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 the local Technical Data Sheet for the product concerned, copies of which will be supplied on request.

JEMKON
ISO 9001:2008