

# SUPER MIX 2K

QUICK CEMENT FOR RESIDENTIAL AND INDUSTRIAL CONSTRUCTION

## TECHNICAL DATA SHEET Page 1/2

Supermix 2K ternary solid binder complies with the measures of the AgBB scheme as well as the DIBT additive principles. It was tested by the Institute for Building Biology in Rosenheim and certified to be environmentally compatible building materials, classified in emission class A+ as virtually emission-free.



### APPLICATION AREA / PROPERTIES

- For the production of high-quality screed structures in residential and industrial construction
- For indoor and outdoor use
- Joint-free and dimensionally stable large areas
- Can be heated and laid early
- Ideal for terminated construction projects of any kind

### PROPERTIES

- Very good processing properties
- Virtually no shrinkage and deformation behavior
- Significantly higher early and final screed strength
- Production of thin-layer screed
- Significant increase of compression and bending tensile strength
- Low-chromate

### SUPERMIX 2K / READINESS FOR LAYING IN 12<sup>TH</sup>-14<sup>TH</sup> days

Recommended dosage (strengths according to DIN EN 13 892-2)					
Days	Compression strength [N/mm <sup>2</sup> ]	Bending tensile strength [N/mm <sup>2</sup> ]	ratio Binder : aggregate	w/b-ratio	material consumption of a 10 mm layer
after 3 days after 28 days	≥ 20 ≥ 30	≥ 3 ≥ 5	1 : 6 (50 kg : 300 kg)	max. 0.50	ca. 2,5 kg/m <sup>2</sup>
after 3 days after 28 days	≥ 30 ≥ 40	≥ 4 ≥ 6	1 : 5 (62.5 kg : 300 kg)	max. 0.47	ca. 3,2 kg/m <sup>2</sup>
after 3 days after 28 days	≥ 35 ≥ 50*	≥ 5 ≥ 7*	1 : 4 (75 kg : 300 kg)	max. 0.44	ca. 3,8 kg/m <sup>2</sup>

\* Add 10% grit (2 buckets at 10 l / mixture) ideally 2-5 mm, dependent on the results of the initial test (grading curve)

- Heated screed DIN 18560 T2: from 62.5 kg Supermix 2K to the mixture, thin-layered heated screed (construction type A) can be equipped with a heating pipe cover ≥ 30 mm (note initial test) and a surface tensile strength of average 1.5 N/mm<sup>2</sup> can be achieved. One requirement for achieving the mean values is machine-based screed surface finishing and adherence to the recommended W/Z-value of ≤ 0.50.
- Ready-for-laying for coatings and ceramic floor coverings at ≤ 3 % CM-moisture (in combination with 300 ml Activator possible 24 hours after screed laying)
- TOPSICHT is perfectly suitable to achieve even surfaces and slow down drying out
- If not using TOPSICHT, the usable surface can be covered after smoothing with a foil for max. 24 hours, if needed.
- At temperatures below 5 °C, the binding process of the binding agent will be delayed or completely interrupted (hydration and stability standstill)
- No rewetting after achieving readiness-for-laying under normal construction site conditions

### BUILDING CLIMATE CONDITIONS

- Note construction site preparation as per DIN 18560
- Protection from rain, draft and direct sun exposure during the curing phase
- Room and substrate temperatures not below 5 °C and not above 30 °C

### SCREED CURING

- Freshly laid screed/special screed may not be covered during the curing process. The screed may not even be partially covered with building materials, such as gypsum boards - this will delay the curing process and lead to false results in the moisture measurement



## SUBSTRATE PREPARATION

- The cement-bound substrate must be clean with open pores, absorbent and free of soft, removable components
- The load-bearing capacity of the substrate must correspond to the expected load
- In case of rolling strain, the surface tensile strength may be an average of 1.5 N/mm<sup>2</sup> where the smallest value may not fall below 1.2 N/mm<sup>2</sup>
- The substrate must be prepared using the common standards and current state of technology
- The prepared substrate must be capable of bearing loads, free of oil and grease and free of dust and separating agents
- According to DIN EN 197-1 for bonded screeds all substrates produced with normal cements are allowed. If modified screeds (except e-4 products) are suitable as a substrate or not, must be tested on your own responsibility. Direct bond to calcium sulfate screeds is not permitted. For bonded screed (screed on screed), make sure that the subfloor has at least the same quality as the top layer and a minimum thickness of 50 mm

## BONDED SCREED WITH MINERAL BONDING BRIDGE

- Please note the technical data sheet QUICKPICK

## BONDED SCREEN WITH SYNTHETIC RESIN BONDING BRIDGE

- Please note the technical data sheets TPOX 5° or TPOX 10°

## MIX SUPERMIX 2 BONDING SLURRIES

Fill approx. 9-12 liters of water with 500 ml Quickpick into the mixing container, then add a bag of Supermix 2K, mix together, and add water until mass has turned into ductile, mush-like slurry (not liquid, watery)

## PROCESSING INFORMATION

- Add activator to the first mixing water
- The mixing duration is min. 2 minutes after addition of all components
- Limit mixing water to minimum (water reduction or note W/B-value 0.45-0.50)
- Installation: Compacting, exact stripping of the screed using conventional craft technique. Machine smoothing of the screed is required to achieve high surface stability (for example for direct use or as coating background)
- Please observe the general rules of the screed laying craft, especially DIN 18560, screed in construction

## RAW MATERIALS

- Supermix 2K/Activator as per recommended dosage
- Aggregate: Pursuant to DIN EN 13139 and DIN 1045/2 grading curve A/B, 0-8 mm as well as 0-4 mm for the production of screed
- When using our products, no additives/binders from other manufacturers may be used

## SAFETY INFORMATION

General industrial hygiene standards must be observed when using our e-4 products.

## STANDARDS AND INSPECTION REGULATIONS

All common standards, provisions and crafts regulations apply, in particular DIN 18560, ÖNORM 3732, EN 13318, EN 13813, DIN 18353 and the work standards BEB newest version as well as the state of technology in screed laying.

## ACTIVATOR

The activator may only be used for the Supermix 2K high-performance binding agent as it was especially developed for that purpose

Please note: The English translation is based on the German original. The translated version of the German data sheets is a courtesy translation and for informational purposes only. In case of dispute, controversy or inconsistency between the German version and the version in another language the German version is binding in accordance with the legal provisions. The German version is available on our website or will be sent upon written request.

Our information is based on our current experiences and developments thus we take warranty for the flawless quality of our products. We cannot assume responsibility for the success of the work carried out by you, as no legal liability can be derived due to different construction site conditions, laying techniques and construction work. We recommend creating a trial area for individual situations. Moreover, our General Terms and Conditions apply. With the publication of this technical data sheet, any previous versions are no longer valid.

**Color:** grey  
**Form:** powder  
**Form of delivery:** bag to 25 kg net

**Shelf life:** min. 6 months, store protected from sunlight and frost  
**Processing temperature:** : from +5 °C to +30 °C



## FIELD SIZES AND JOINTS

### FIELD SIZE/JOINTS ON INSULATION AND SEPARATION LAYER

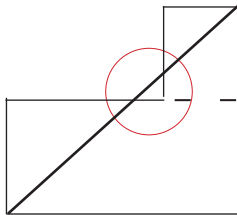
- Surfaces not fully heated must always be separated by an expansion joint (exception: unheated edge zones up to 1 m in width and kitchenettes)
- Create expansion joint between heated and unheated areas
- For areas with separate heat controls (heating circuits), create an expansion joint
- Heated areas up to approx. 100 m<sup>2</sup>, unheated areas up to approx. 200 m<sup>2</sup> (max. side length 15 m) with a side ratio of 1:2, for which the floor plan areas L-areas or U-areas must be assessed as follows

Deviations from the previous points must be coordinated with e-4 GmbH.

#### EXAMPLES:

#### L-AREAS WITH FLOOR PLAN LENGTH

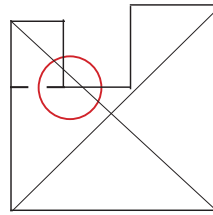
Up to 10 m heated and 15 m unheated:



Divide L-areas into two areas in case of overlap (see red circle) and separate re-entrant corner using a suitable joint

#### U-AREAS WITH FLOOR PLAN LENGTH

Up to 10 m heated and 15 m unheated:



Separate U-areas in case of overlap (see red circle) using a suitable joint. The remaining L-area must be re-assessed.

Complex asymmetrical areas must be divided by expansion joints so that partial areas with the easiest possible geometries are created.

### COMPOUND SCREED

- Compound screed can be completed without joints, except for building joints. Building joints must remain congruent
- A suitable substrate pursuant to the common standards must be ensured
- Use bonding slurries made from Supermix 2K combined with Quickpick high-performance bonding bridge or bonding bridges from the TPOX product series (fresh in fresh)

### FAIR-FACED SCREED TROWELED/SANDED

- Experience has shown that a grading curve 50/50 is ideal for the production of troweled fair-faced screed where the creation of a test surface through different laying techniques is required
- Trowel-smoothed screed should exhibit a thickness of  $\geq 40$  mm as the screed structure may otherwise be destroyed by the trowel.
- Create fair-faced screed without activator
- Due to the high requirements of fair-faced screed, they must have a mixing ratio of 1:5 (binding agent/grading curve)

### INDUSTRIAL SCREED

- Industrial screed is possible with Supermix 2K; such applications must be coordinated depending on the object