

MC-Floor TurboCem

rapid-set cement for producing dimensionally stable screeds for early overlay



PRODUCT PROPERTIES

- Ternary speciality binder
- Long open time
- Hardens fast and virtually free of deformation
- Shrinkage class SW1-low shrinkage (< 0.2 mm/m) according to DIN 18560-1
- Fast accessibility
- Rapid coverability / coatability
- Frost-thaw resistant according to DIN CEN/TS 12390-9
- Very low emission according to GEV-EMICODE, categorie EC1^{PLUS}
- Registered with DGNB (Code: A6EF94)

AREAS OF APPLICATION

- Formulation of earth-moist screeds up to grade CT-C50-F7 to EN 13813
- For the installation of quickly coverable screeds
- For the production of stress-free-setting and dimensionally stable screeds.
- Suitable for underfloor heating screeds
- Suitable for wet rooms
- Suitable for indoor and outdoor use

APPLICATION ADVICE

Substrate preparation for compound screeds

The substrate must be resilient, dry, clean, frost-free and free of dirt, oil, release agent, paints, coatings or other adhesion-reducing substances. As a bond coat, a mixture of MC-Estrifan Additive KD 961 and water (1:3) is mixed with MC-Floor TurboCem to a slurry-like consistency and brushed into the matt-damp substrate. The screed is then installed fresh-in-fresh on the bond coat.

Application Method

MC-Floor TurboCem should be mixed with 0/8 screed sand to create a screed mortar compliant with EN 13813. When adjusting the application consistency, do not exceed a w/c value of 0.45. Make due allowance for the moisture content of the sand! The screed mortar can be prepared and applied with commercially available screed mixers or screed mixer/feed pumps. If there is any stoppage in the work, the mixers, pumps and hoses must be thoroughly cleaned immediately. The screed can be compacted and precision-levelled using standard techniques. The screed should be worked and installed in line with all relevant codes and standards as last amended.

Screed Drying

During drying, the screed must be protected from direct sunlight and draught air. The drying process is influenced by the screed thickness and the ambient conditions. Low temperatures decelerate, high temperatures accelerate the hardening process.

Underfloor Heating Screeds

For heated screeds, the existing underfloor heating can be heated to 20 °C before and during screed installation. The actual room heating function should not be initiated until at least 3 – 4 days after screed installation. In so doing, the feed temperature should be gradually ramped up at a maximum rate of 5 °C per day. After holding the maximum temperature for one day, it must be gradually lowered again by 10 °C per day to the initial temperature.

Further Information

Before any covering or coating, perform a CM measurement to check the residual moisture level. The maximum permissible residual moisture for the respective surface coverings must be observed. For screed formulations with a mixing ratio of 1:4.3, ceramic coverings and special coating systems from MC-Bauchemie can be applied after just 24 hours.

The following recipe examples and associated technical values given apply to 200 l mortar mixtures for earth-moist, non-flowing cement screeds according to DIN 18560.

TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Grade		C50-F7	
Example formulation	kg	60	MC-Floor TurboCem
		300	Screed sand 0/8 (B8 to DIN 1045-2)
	l	≤ 27	water; make due allowance for the moisture content of the sand (w/c max. 0.45)
Accessible after	hours	6	
Ready for overlaying after (< 2 CM%)	days	3	at 10°C and 80% rel. humidity
Mixing ratio		1 : 5	
Working time	minutes	> 30	at 20° C and 50 % rel. humidity
Application conditions	°C	≥ 5 ≤ 30	air, substrate and material temperatures
	%	≤ 85	rel. humidity
	K	3	above dew point
Consumption	kg/m ² /cm	approx. 3	related to rapid cement
Flexural strength	N/mm ²		
72 h		> 4	
28 d		> 7	
Compressive strength	N/mm ²		
72 h		> 30	
28 d		> 50	
Tensile strength (surface)	N/mm ²		
7 d	N/mm ²	≥ 2	after substrate preparation by milling/dust-free shot
Abrasion resistance per Böhme test	cm ³ /50 cm ²	< 9	according to DIN EN 13892
Layer thickness	mm	≥ 25	for a screed aggregate of 0/8
Equipment cleaning agent	water		
Colour	grey		
Delivery form	20 kg bag		
Self-monitoring	EN ISO 9001		
Storage	Can be stored in cool and dry conditions for at least 6 months in original unopened packs. Protect from frost.		
Packaging disposal	Make sure single-use containers are completely empty.		

Safety instructions

Please note the safety information and advice given on the packaging labels and safety data sheets. GISCODE : ZP1

Note: The information in this data sheet must be adapted by the installer, specialist planner, and/or building inspector to the respective construction project, intended use, and specific local conditions. Any non-standard local conditions must be taken into account, and application-specific conditions must be reviewed in advance by the planner/specifier. Deviations from the specified standard conditions require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2500027194]

TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Grade		C40-F6	
Example formulation	kg	50	MC-Floor TurboCem
		300	Screed sand 0/8 (B8 to DIN 1045-2)
	l	≤ 22	water; make due allowance for the moisture content of the sand (w/c max. 0.45)
Accessible after	hours	10	at 20° C and 50 % rel. humidity
Ready for overlaying after (< 2 CM%)	days	< 7	at 10° C and 80% rel. humidity
Mixing ratio		1 : 6	
Working time	minutes	> 45	at 20° C and 50 % rel. humidity
Application conditions	°C	≥ 5 ≤ 30	air, substrate and material temperatures
	%	≤ 85	rel. humidity
	K	3	above dew point
Consumption	kg/m ² /cm	approx. 2.5	related to rapid cement
Flexural strength	N/mm ²		
72 h		> 3	
28 d		> 6	
Compressive strength	N/mm ²		
72 h		> 25	
28 d		> 40	
Tensile strength	N/mm ²		
7 d		≥ 1.5	surface
Abrasion resistance per Böhme test	cm ³ /50 cm ²	< 9	according to DIN EN 13892
Layer thickness	mm	≥ 25	for a screed aggregate of 0/8
Equipment cleaning agent	water		
Colour	grey		
Delivery form	20 kg bag		
Self-monitoring	EN ISO 9001		
Storage	Can be stored in cool and dry conditions for at least 6.0 months in original unopened packs. Protect from frost.		
Packaging disposal	Make sure single-use containers are completely empty.		

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TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Grade		C30-F5	
Example formulation	kg	40	MC-Floor TurboCem
		300	Screed sand 0/8 (B8 to DIN 1045-2)
	l	< 18	water; make due allowance for the moisture content of the sand (w/c max. 0.45)
Accessible after	hours	12	at 20° C and 50 % rel. humidity
Ready for overlaying after (< 2 CM%)	days	< 14	at 10° C and 80% rel. humidity
Mixing ratio		1 : 7.5	
Working time	minutes	> 45	at 20° C and 50 % rel. humidity
Application conditions	°C	≥ 5 ≤ 30	air, substrate and material temperatures
	%	≤ 85	rel. humidity
	K	3	above dew point
Consumption	kg/m ² /cm	approx. 2	related to rapid cement
Flexural strength	N/mm ²		
72 h		> 3	
28 d		> 5	
Compressive strength	N/mm ²		
72 h		> 15	
28 d		> 30	
Tensile strength	N/mm ²		
7 d		≥ 1.2	surface
Layer thickness	mm	≥ 25	for a screed aggregate of 0/8
Equipment cleaning agent	water		
Colour	grey		
Delivery form	20 kg bag		
Self-monitoring	EN ISO 9001		
Storage	Can be stored in cool and dry conditions for at least 6.0 months in original unopened packs. Protect from frost.		
Packaging disposal	Make sure single-use containers are completely empty.		

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