

# FLOATING SCREED

## FE20 FLOATING SCREED (0-2 mm)

### TEST CERTIFICATES AND SUPPORTING DOCUMENTS

- › Product acc. to DIN EN 13813 "Cement-based screeds for wearing layers"
- › Non-combustible - verification with a test for the classification according to building material class A1 resp. A1fl according to DIN 13501-1
- › Factory production control acc. to DIN EN 13813
- › Company certification acc. to DIN EN ISO 9001:2015

## PROPERTIES

- › High-quality floating screed on the basis of Portland cement with high impermeability for interior and exterior use
- › Ready to use dry mortar, only requires mixing with water
- › High flowability for high laying performance
- › Develops high early strength and can be walked on after 3 hours, achieves a residual moisture content of  $\leq 4.0\%$  after 24 hours (CM device)
- › Can be used as a floor on its own or topped with a covering
- › The surface can be finished smooth or fine rough (sanded)
- › Quick and economical due to mechanical installation
- › Water-tight, largely oil-proof
- › Reinforced with alkali-resistant plastic fibres for installation requiring few joints

## AREAS OF APPLICATION

- › Composite screed for overlays and levelling layers with a gradient of up to 1.5 %
- › Surface coverings in living quarters and industrial sections, indoors and outdoors
- › New constructions, rebuildings and refurbishment
- › Garages, parking decks, balconies
- › Terraces, cellar soils
- › Can be used under all surface coverings

### MOISTURE CLASSES BASED ON CONCRETE CORROSION FROM ALKALI-SILICIC ACID REACTIONS

Moisture class	WO	WF	WA	WS
<b>FE20</b>	•	•	•	•

The aggregates in PAGEL®'s products comply with the requirements of alkali sensitivity class E1 from non-hazardous sources specified under DIN EN 12620.

### EXPOSURE CLASS ALLOCATION ACC. TO: DIN EN 206-1 / DIN 1045-2

	XO	XC	XD	XS	XF	XA	XM
	1 2 3 4	1 2 3	1 2 3	1 2 3 4	1 2 3 4	1 2 3*	1 2 3
<b>FE20</b>	•	•••	•••	•••	•••	••	•

\* Having sulfate attack up to 600 mg/l

## TECHNICAL DATA

TYPE		FE20	
Grain size		mm	0-2
Layer thickness		mm	5-20
Water for mixing	max.	%	19
Consumption approx.		kg/(m <sup>2</sup> ·mm)	1.8
Fresh mortar raw density approx.		kg/m <sup>3</sup>	2,110
Processing time 20 °C approx.		min	20
Slump flow		mm	≥ 650
Measure of extension (without lifting slope) approx.		mm	300
Swelling	24 h	Vol.-%	≥ 0.1
Compressive strength*	1 d	N/mm <sup>2</sup>	≥ 20
	7 d	N/mm <sup>2</sup>	≥ 45
	28 d	N/mm <sup>2</sup>	≥ 55
Bending tensile strength*	1 d	N/mm <sup>2</sup>	≥ 4
	7 d	N/mm <sup>2</sup>	≥ 6
	28 d	N/mm <sup>2</sup>	≥ 8

\* Testing of bending tensile and compressive strength in accordance with DIN EN 196-1

**Note:** All fresh and solid mortars are tested at 20 °C ± 2 °C. Higher or lower temperatures result in deviating properties of fresh respectively solid mortars and test results. Depending on the temperature, the consistency can be adapted with a slight reduction of the mixing water.

<b>Storage:</b>	6 months. Cool, dry, free from frost. Unopened in its original container.
<b>Delivery form:</b>	20-kg bag, Euro palette 960 kg
<b>Hazard class:</b>	Non-hazardous material, observe information on packaging.
<b>GISCODE:</b>	ZP1
<b>Wear resistance:</b>	BCA test acc. to DIN 13892-4 = 0.107 cm <sup>3</sup> and 4 µm Resistance class AR 0.5 (≤ 50 µm)
<b>Requirements:</b>	EN 13813 for cementitious SVM ≤ AR6 (≤ 600 µm) EFNARC for cementitious industrial floors ≤ AR2 (≤ 200 µm)
<b>Equipment:</b>	Toothed screed, smoothing screed

### PAGEL PRODUCT COMPOSITION:

Cement:	acc. to DIN EN 197-1
Aggregate:	acc. to DIN EN 12620
Additions:	acc. to DIN EN 450, general building inspection approval (abZ), DIN EN 13263 (fly ash, microsilica, etc.)

## APPLICATION

### SUBSTRATE PREPARATION:

Remove loose and unsound material such as cement slurry and dirt etc. using suitable methods, e.g. shot-blasting or similar until the underlying solid grain structure has been exposed.

Chipped spots and recesses in the concrete substrate must be levelled prior to the coating (**EH1** or **U10** as a bonding layer and **U40** respectively **U80** as levelling mortar to be levelled coarsely).

A sufficient average tear strength (1.5 N/mm<sup>2</sup>, KEW 1.0 N/mm<sup>2</sup>) must be ensured.

### Prewetting:

Prewet the concrete substrate to capillary saturation for approx. 6-24 hours.

### Reinforcing steel:

Blast all rust off exposed reinforcement bars until the underlying metal has been exposed acc. to purity grade SA 2 ½ in accordance with DIN EN ISO 12944-4.

### FORMWORK, ENCLOSURES FOR JOINTS AND BUILDING COMPONENTS:

If necessary, enclose the concrete area to be coated using a formwork (non-absorbent). Structural joints must be taken on. These are either enclosed or sealed flush with the concrete substrate with forming-elastic profile strips. Rising building components and wall connections must be thermally separated with expansion strips. 24 hours after applying **FE20**, recut the coating above the structural joints.

### MIXING:

The dry mortar is supplied ready to use and only needs to be mixed with water. Fill the specified amount of water apart from a residual amount into a clean and suitable mixing device (e.g. compulsory mixer). Add the dry mortar and mix for at least 3 minutes. Add the remaining water and mix for at least another 2 minutes until it forms a homogeneous mass.

### APPLICATION:

#### MANUAL APPLICATION:

Apply **FE20** on the matt-moist substrate and distribute it evenly with a toothed screed on the surface. In case of a very rough substrate, predistribute the mortar mass in a thin layer with a smoothing screed, without skids, as a bonding layer before applying the intended layer thickness using previously levelled height gauges. Do not rework the fresh **FE20** with a spiked roller. The mortar is to be levelled and spread with the help of a turned round smoothing screed – as a finishing float – above the previously aligned level points.

#### MECHANICAL APPLICATION:

The best possible laying performance and laying quality is achieved with the M-Tec Duo 2000 mixing and feed pump by the company M-Tec.  
Note: In case of frost, please get into contact with us; lower temperatures delay strength development and reduce flowability, higher temperatures increase flowability, colder mixing water disturbs flowability.

#### FOLLOW-UP TREATMENT

**FE20** can normally be walked on cautiously after 2-3 hours so that the required follow-up treatment, including spraying water and/or laying of foil on top, can be carried out. The period for follow-up treatment is at least 3 days. If within the processing time of 30 minutes, quartz sand is spread in excess onto the surface, remove any loose sand by brushing-off or Hoovering after 12 hours at the earliest and rewet with water.

#### OS - COATING:

If an OS coating is to be applied, a follow-up treatment time of 12 hours with water and/or foil is sufficient, if after 12 hours the surface is prepared to take up the OS coating (screed grinder or chamber shot-blasting device) and after 24 hours already the overcoating takes place (residual moisture **FE20** (20 °C) after 24 hours 4 vol. %).