

# STEEL FIBRE FLOOR

## IB50SF STEEL FIBRE FLOOR

### TEST CERTIFICATES AND SUPPORTING DOCUMENTS

- › Product acc. to
  - DIN EN 13813 "Cement-based screed for wearing layers"
- › High wear resistance - verification with a test acc. to Böhme acc. to DIN EN 13892-3
- › Verification of the adhesive pull strength acc. to DIN EN 13892-3
- › Factory production control acc. to DIN EN 13813
- › Company certification acc. to DIN EN ISO 9001:2015

### PROPERTIES

- › Ready to use, cement-bound steel fibre floor
- › Only has to be mixed with drinking water
- › High Bending tensile and impact strength
- › High resistance to mechanical loads
- › Also available with stainless steel fibres
- › Easy to process
- › Abrasion resistant
- › Non-combustible
- › Water-tight, largely oil-proof
- › Reduced shrinkage

### SYSTEM COMPONENTS

- RM02** Corrosion protection and bonding agent  
**IH10** Industrial floor-Bonding agent  
**IB50SF** Steel fibre floor

### AREAS OF APPLICATION

- › Industrial floors subject to heavy-duty use
- › Ramps, warehouses
- › Tank halls, garages, workshops
- › Carriage balances or truck balances

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

Feuchtigkeitsklasse	WO	WF	WA	WS
<b>IB50SF</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
	1234	123	123	123	1234	123**	123

<b>IB50SF</b>	•	••••	••••	••••	••••	••	••
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\* Having sulfate attack up to 600 mg/l

\*\* With protective measures according to DIN 1045-2

## TECHNICAL DATA

TYPE			IB50SF
Grain size		mm	0-5
Amount of water	max.	%	12
Processing time approx.		min	30
Consumption approx.		kg/(m <sup>2</sup> · mm)	2.2
Layer thickness**		mm	20-100
Compressive strength	1 d	N/mm <sup>2</sup>	≥ 40
	7 d	N/mm <sup>2</sup>	≥ 60
	28 d	N/mm <sup>2</sup>	≥ 70
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
Adhesive pull strength	28 d	N/mm <sup>2</sup>	≥ 2.0
Abrasion DIN EN 13813 approx.	28 d	cm <sup>3</sup> /50 cm <sup>2</sup>	7

\* Concrete compressive strength tested as specified by DIN EN 12390-3;

Bending tensile strength tested as specified by DIN EN 12390-5

\*\* The layer thickness must be matched with the stress group and the load-bearing capacity of the substrate.

**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.

**Storage:** 12 months. Cool, dry, free from frost. Unopened in its original container.

**Delivery form:** 25-kg bag, Euro pallet 1,000 kg

**Hazard class:** Non-hazardous material, observe information on packaging.

**GISCODE:** ZP1

**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.)

Admixtures: acc. to DIN EN 934-4

## PROCESSING

### GENERAL NOTES ON PLANNING:

The layer thicknesses of the floor structures must be matched to the stress group and the condition of the substrate. To avoid cracking, a suitable working joint pattern, maximum individual area sizes and length-to-side ratios must be planned appropriately. Adjacent components such as walls and supports must be decoupled from the floor structure if necessary.

### 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.

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.

### Reinforced concrete:

The grade of surface preparation of reinforcement as well as other metallic parts is based on the requirements of the current applicable regulations and must be ensured before the application.

### Non-iron metals:

Cement and cement-bound building materials may cause non-iron-metals in the transitional area of the contact surface (e.g. aluminium, copper, zinc) to loosen. Please contact us for technical advice.

### 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.

### Mixing water:

Drinking water quality

### Temperature range:

+5 °C to +30 °C (component, air and material temperature)

Low temperatures and cold mixing water reduce strength development, require intensive forced mixing and reduce flowability. Higher temperatures accelerate.

### APPLICATION:

#### Corrosion protection:

If necessary, apply two coats of **RM02** corrosion protection and bonding bridge to exposed and prepared reinforcement. Observe the technical data sheet.

#### Manual application:

The mineral bonding bridge **IH10** Industrial floor/Bonding bridge must be brushed onto the prewetted, surface-dry matt damp substrate with a brush or broom without gaps and pore deep. Observe the technical data sheet. The subsequent coating must be applied fresh-in-fresh. The bonding bridge must set completely if work is interrupted. Repeat the process after a suitable waiting time. Apply **IB50SF** Industrial floor fresh-in-fresh with suitable tools on the bonding bridge. Compact, spread and smooth the material afterwards. Machine surface smoothing of the mortar is possible.

### FOLLOW-UP TREATMENT:

Fresh mortar areas must be protected from premature water evaporation (from wind, draughts, direct exposure to sun, etc.) immediately on completion of the work for a period of 3-5 days.

### Suitable curing methods:

Water spray, foil covers with jute sheets, thermofoils or moisture-retaining covering sheets, **O1** Evaporation protection.

The technical data sheet must be observed when using **O1** Evaporation protection.

## Notes

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