

How to... make the perfect steel fibre floor

IN 10 STEPS

This guide includes some general principles on how to make a floor. You should always take into account the specific situation and (soil) conditions. The information provided in this guide is provided "as is" and any express or implied warranties, including , but not limited to the implied warranty of fitness for a particular purpose are hereby disclaimed. Bekaert and its affiliates make no representations and warranties in relation to this guide and the information and materials provided herein and Bekaert and its affiliates do not warrant that the information in this guide is complete, true, accurate or non-misleading. Bekaert and its affiliates shall in no event be liable to you (whether based on contract, strict liability, tort or otherwise, including negligence) in relation to the contents of, or use of, or otherwise in connection with, this guide, for any direct, indirect, incidental, special, exemplary or consequential damages, (including but not limited to business losses, losses of revenue, income, profits or anticipated savings, lost of contracts or business relationship, or loss of reputation or goodwill), even if advised of the possibility thereof.

The ultimate steel fibre floor manual

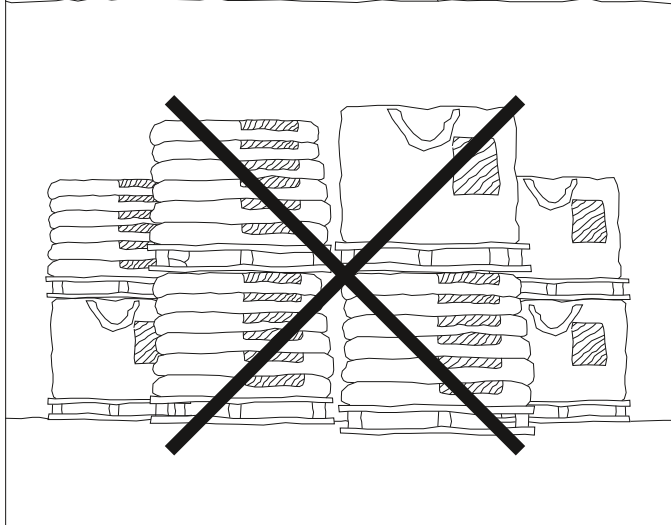
10 steps to make the perfect floor:

- 1** compact and flatten the sub-base
- 2** prepare the job well
- 3** use a correct dosing & mixing
- 4** time your pouring precisely
- 5** vibrate immediately
- 6** trowel the surface at the right speed
- 7** apply a curing compound
- 8** sawcut the joints if appropriate
- 9** your floor is ready for use!
- 10** maintain your floor properly!

**A multidimensional network
reinforces your floor**

**Four reasons to have all floors
with steel fibres**

Cost efficient and durable floors



Preliminary

Take care of your steel fibres!

AVOID BAD WEATHER CONDITIONS

KEEP YOUR FIBRES IN A DRY PLACE

DO NOT STACK THE PALLETS/BIG BAGS



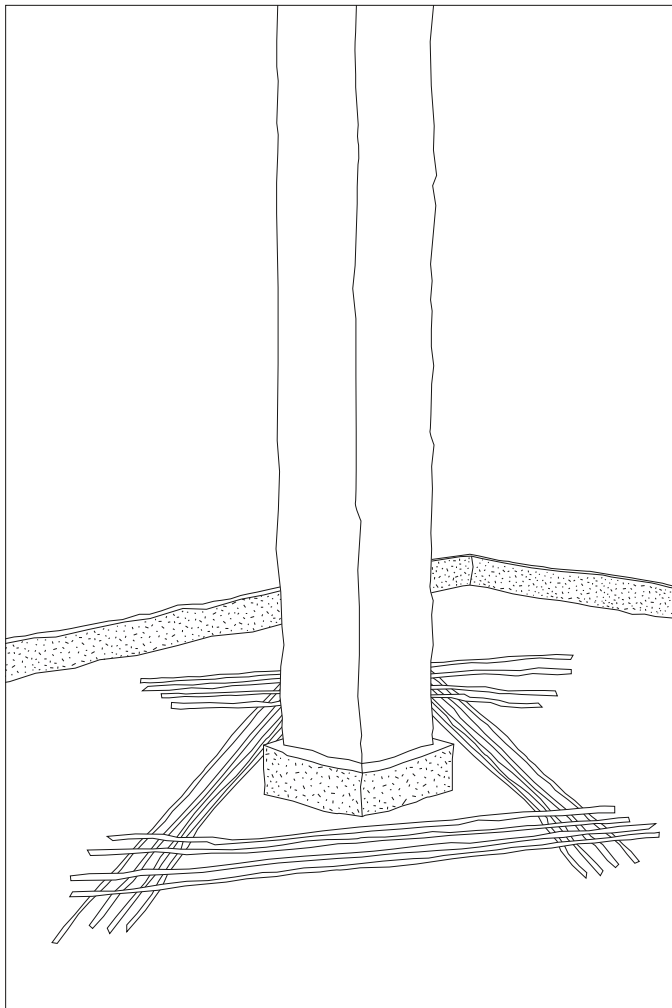
1

compact
and flatten
the sub-base

Check the compaction factor by plate test !

The flat tolerance limit is $\pm 10\text{mm}$.

Provide passes over each fill layer using vibro-compactors / rollers.

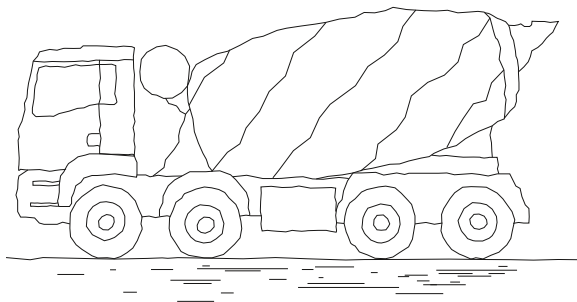
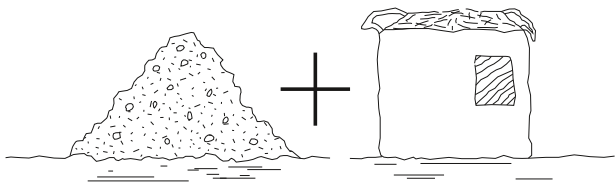


2

prepare

the job well

Use a PE foil above the sub-base layer or make it wet.
Provide restraining bars and isolate columns, corners and walls. Position construction joints.

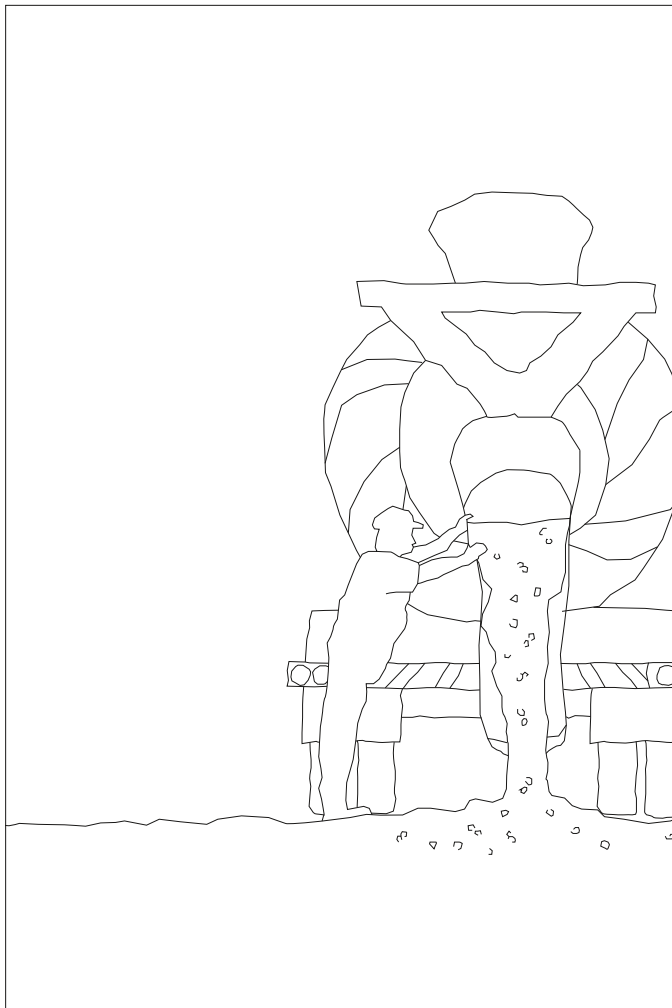


3

use a correct dosing & mixing

Be accurate and uniform in your dosing. Never take the fibres as the first ingredient. Use a continuous grading curve. Mix for sufficient time.

www.bekaert.com/dosingdramix



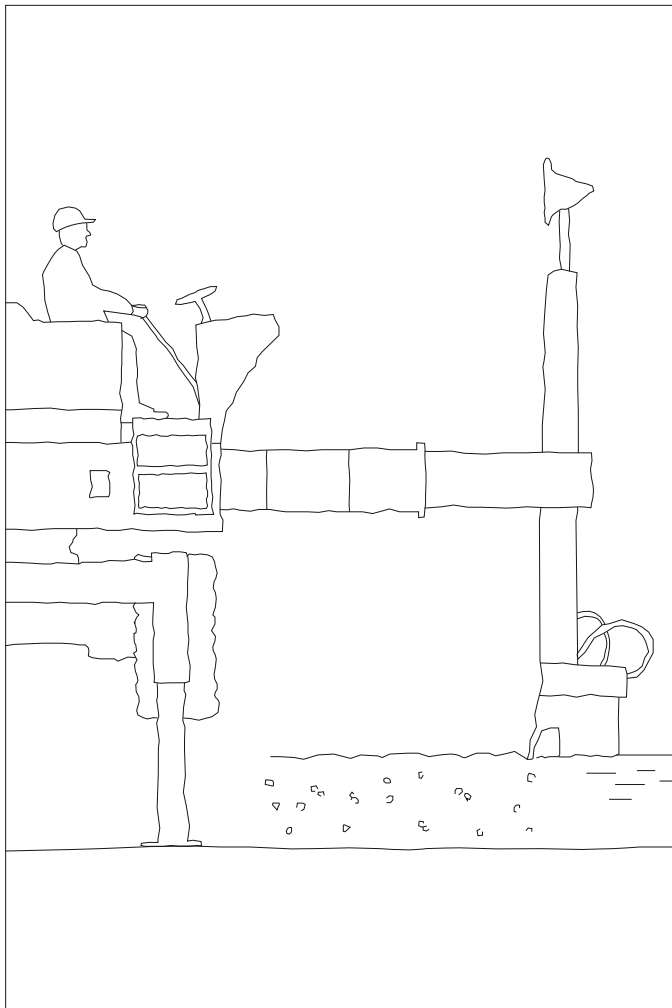
4

time

your pouring
precisely

Pour the concrete on the prepared surface within 60 min.
after the making of the concrete mix.

This can be done manually, by using a pump or by dumping
the concrete directly from the truck mixer.

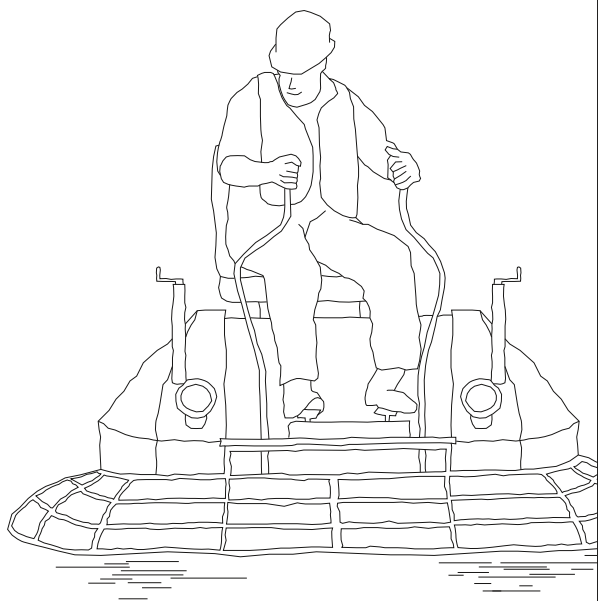


5

vibrate

immediately

Vibrate the concrete immediately after pouring. Use a screed vibrator and move it over the surface. At edges and corners use a needle vibrator. On the surface the fibres have to be covered with 3mm paste and possibly a dry shake.



6

trowel

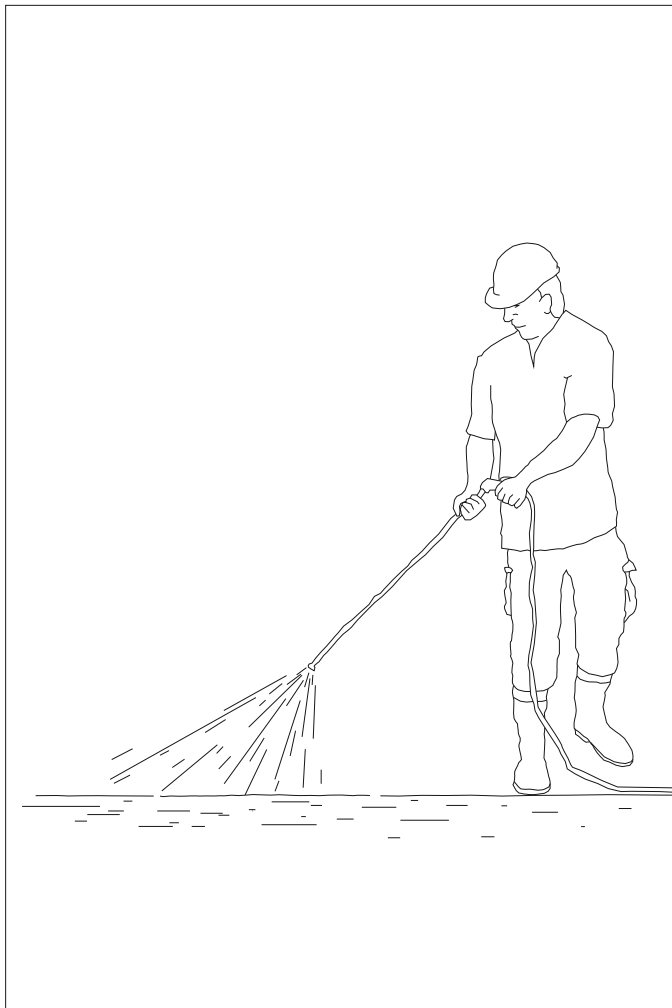
the surface

at the right

speed

You can start the power float as soon as you have a finger imprint of 3~5mm on the surface. Start slowly.

You need minimum three passages to ensure the hardness. Always adjust the angle of the blade and your operation speed to avoid fibre exposure.



7

apply
a curing
compound

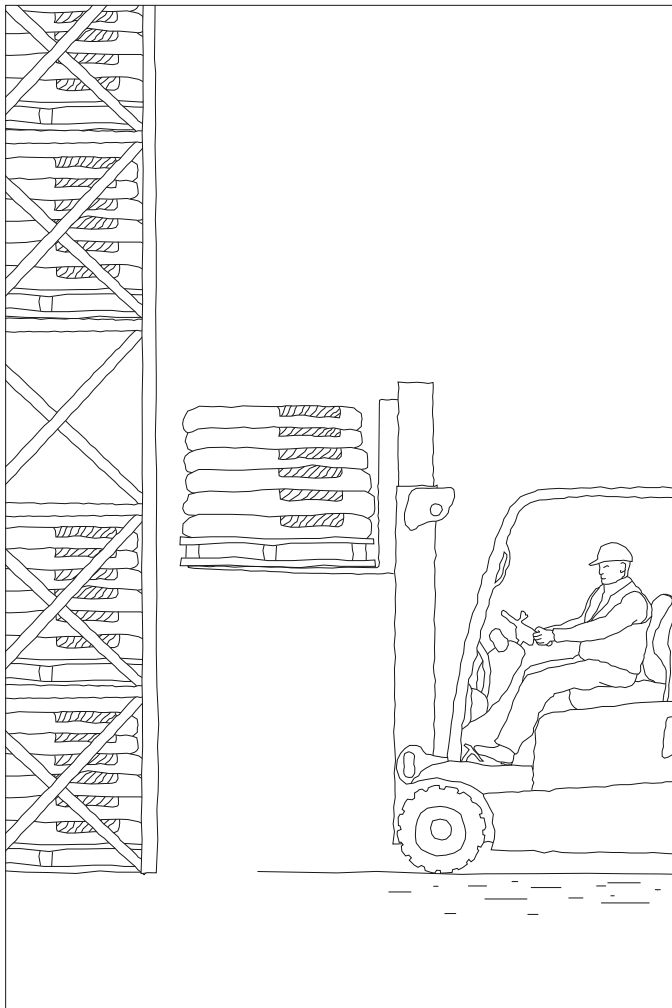
Avoid early shrinkage by curing. Curing can be done by keeping your surface wet or applying a chemical compound.



8

saw cut
the joints
if appropriate

Start to saw cut after concrete has reached a compressive strength of 10~15mpa. This is within 16 to 24 hours of the casting. The depth of the saw cut has to be at 1/3 of the slab thickness. The length / width ratio of the area is ≤ 1.5 . For jointless, seamless or floors on piles **no** saw cuts are allowed.



9

your floor
is ready
for use!

You can start loading the floor after 28 days.



10

maintain your floor properly

A good maintenance guarantees a long lasting industrial floor. Clean them and maintain the joints. The result should be a fibre free surface. Occasionally they lay on the surface. If they disturb the operators you can easily remove them.



A multidimensional network reinforces your floor

Reinforcing your industrial floors with steel fibres has many advantages. As the fibres are evenly spread throughout the concrete, every part of your floor is actively reinforced – at the toplayer, in the core, at the sides, at the bottom. No matter what forces are working on your floor, no matter how strong they are, the fibres are always at exactly the right place to do their job.



Four reasons to have all floors with steel fibres

OPTIMAL LOAD BEARING

OPTIMAL CRACK CONTROL

HIGH FATIGUE RESISTANCE

HIGH IMPACT RESISTANCE

Steel fibres reinforce your floor throughout the concrete slab. Even the smallest cracks are under control ensuring safe and efficient operations, allowing also the creation of liquid-tight floors. Thanks to a high fatigue resistance of your fibre floor, maintenance and repair costs are reduced. Fibre floors also better resist impact and keep the surface of your industrial floor intact.



Cost efficient and durable floors

EASIER IN MAINTENANCE

LONGER LIFESPAN

BETTER PERFORMANCE

OPTIMIZED THICKNESS

TIME-SAVING CONSTRUCTION

Steel fibres are the most cost-efficient solution for the reinforcement of floors. Keeping the use of mesh to a minimum or even without any mesh, you save time during construction, while your floor delivers excellent performance and durability, along with optimized crack control.



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