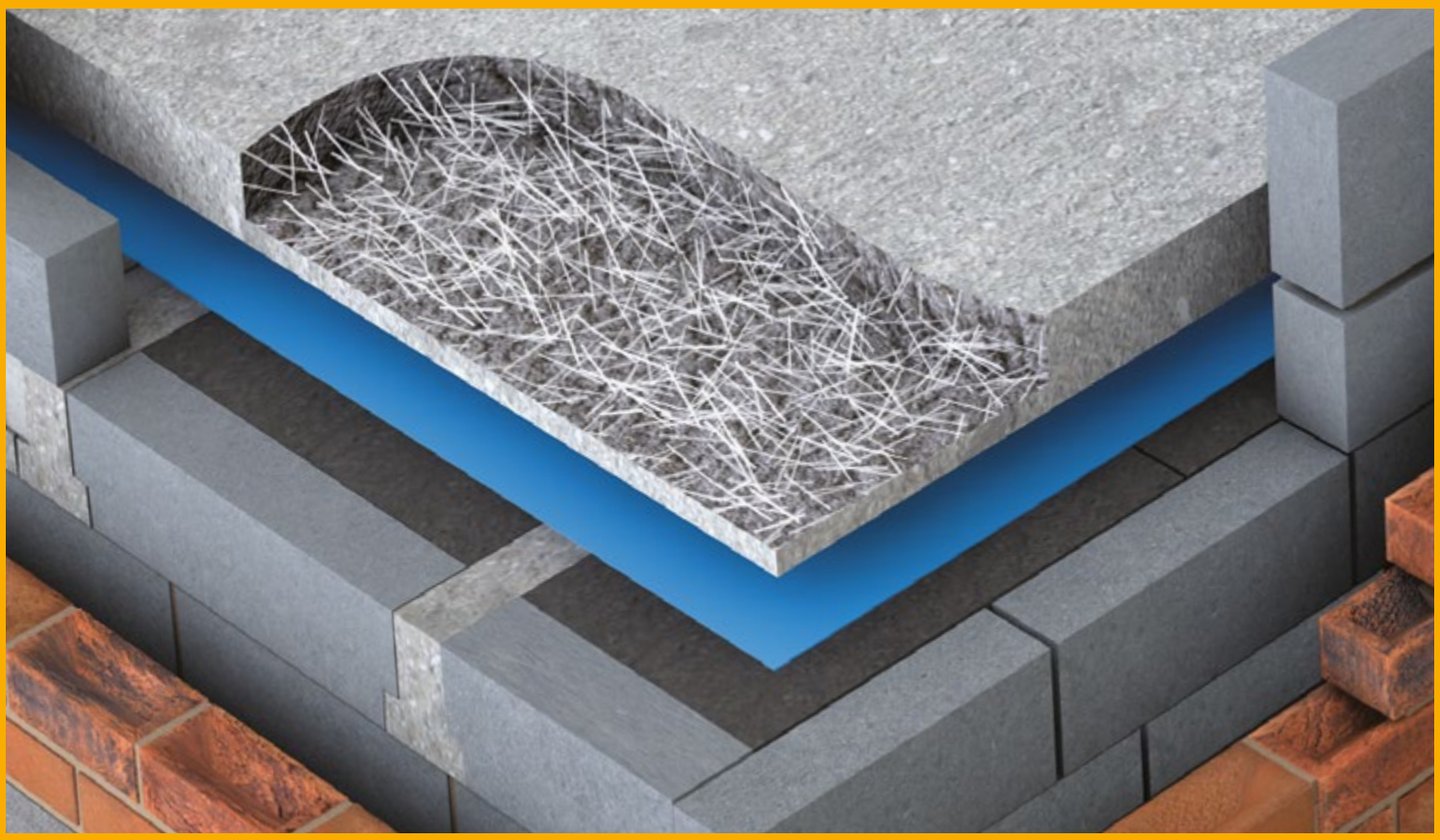


SikaFiber® Force
STRUCTURAL TOPPINGS FOR BEAM AND BLOCK FLOORING

TECHNOLOGY AND SYSTEMS

BUILDING TRUST

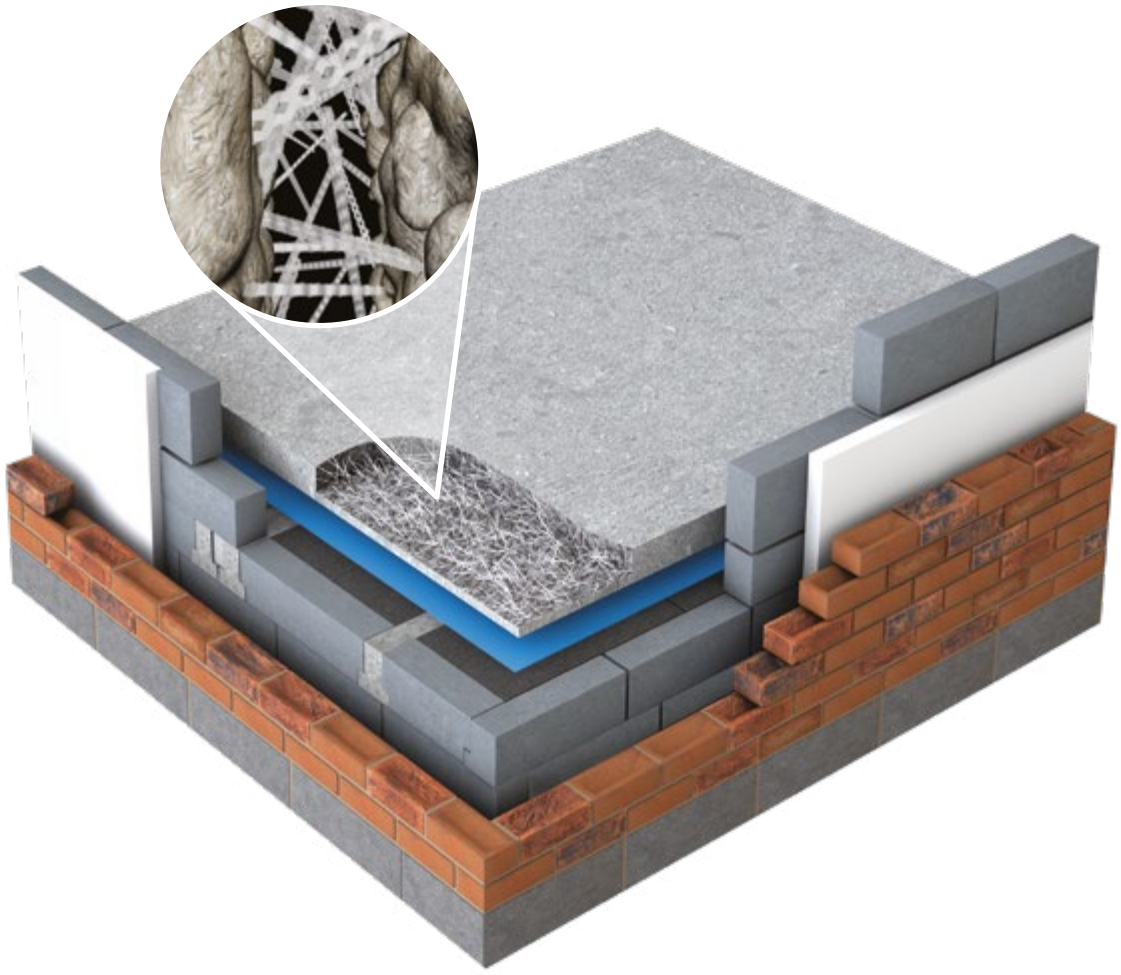
SikaFiber® Force STRUCTURAL TOPPINGS FOR BEAM AND BLOCK FLOORING

SikaFiber® Force SOLUTIONS OFFER PERFORMANCE FIBRES WHICH MEET THE LATEST NHBC STANDARDS. The use of SikaFiber® Force solutions in structural toppings for beam and block flooring systems also complies with BS EN 14889-2:2006. It is the ultimate solution for ready mixers, house builders and ground workers to use in domestic floor concrete toppings.

SikaFiber® Force solutions is a range of macro synthetic fibres from Sika. The fibres are made from polypropylene and are white to transparent in colour. They are 45mm in length, ridged to the touch and embossed on both sides. The embossed nature of the fibres improves the bond within the concrete and reduces pull-out to improve the concrete's performance. When used with the appropriate design and at the recommended dosage, SikaFiber® Force solutions will enhance the toughness of the concrete and alleviate the need for steel mesh, which makes it particularly suitable for use in structural toppings for beam and block flooring systems.

BENEFITS

- Easier and safer to handle compared to steel
- Reduce construction time
- Ready-mixed concrete trucks can discharge at the 'live' edge of the concrete
- Cannot be misplaced
- No need to cut, fix or place steel mesh
- Reduce wear on concrete pumps
- Reduce carbon footprint
- Fibres do not rust or corrode
- Provide a 3-dimensional reinforcement system.



HOW TO SPECIFY AND HANDLE SikaFiber® Force SOLUTIONS IN BEAM AND BLOCK FLOORING

WHEN SPECIFYING SikaFiber® Force SOLUTIONS FOR STRUCTURAL TOPPINGS, it is essential that a best practice approach to the placing and finishing of fibre concrete is taken. The advice given below is intended to help house builders, ground workers and ready mixers get the best results.

CONCRETE MIX

The minimum grade of concrete specified to this application is a C25/30 with a maximum aggregate size of 10mm. It is recommended that the concrete should have a minimum sand content of 47.5% which will aid the placing and finishing of the fibre reinforced concrete mix.

FIBRE TYPE

The Sikafiber® Force solutions which meet NHBC acceptance include a Macro fibre solution at 3.84kg/m^3 of concrete and a steel fibre solution at 17.5kg/m^3 of concrete. Both fibres complies with the relevant BS EN 14889 part 1 or part 2 2006. All BBA certified flooring systems must identify their approved macro and steel fibre system which has been tested for use in reinforced concrete toppings. Both Sikafiber® Force solutions have been tested and approved for loading applications in both residential and communal projects.

WORKABILITY

The company in charge of laying and finishing the structural concrete topping decides the preference of workability. However, the suggested workability is as follows:

- Flowing concrete: slump flow SF1, SF2
- Normal concrete: target slump of consistence Class S3 (100 – 150mm) or S4 (160 – 210mm)

Please note: It is not advisable to order a low workability concrete and then add excessive amounts of water on site. This will cause the concrete to suffer from excessive bleed, segregation and lead to excessive surface dusting and a poor quality surface finish.

LEVELLING AND FINISHING

The concrete ground worker must decide on which method to use when levelling the concrete topping. To get the best results, the following techniques and equipment are recommended:

- For concrete using SF1 and SF2, use finishing tools such as a screed tamping bar or a dapple bar to dapple the concrete as soon as possible
- Concrete with a workability of consistence class S3 or S4 should be placed and compacted with a wooden tamp, bunion tube, beam compaction or magic screeder or similar
- After compaction, the concrete should be skip floated to push any surface fibres down into the concrete for a flat, smooth finish
- Where applicable, the concrete joints should be saw cut within 24 hours.

CURING THE CONCRETE

Concrete should be cured as soon as practically possible using a curing agent such as Sikafloor®-Proseal or a suitable cover to ensure the concrete cures properly.

BATCHING

Separate batching guidelines which advise the correct methods of mixing fibre concrete are available via the Sika website **www.sikaconcrete.co.uk**

Please note: It is always recommended that trials be carried out prior to any concrete pour to ensure that the correct SikaFiber® Force solution entrained mix meets the customers' expectations.

For further advice and information on using SikaFiber® Force Solutions in structural floor toppings, call **01707 394444**, email **concrete@sika.co.uk** or visit **www.sikaconcrete.co.uk**

SIKA FULL RANGE SOLUTIONS FOR CONSTRUCTION:

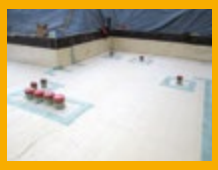
LIQUID APPLIED ROOFING

SINGLE PLY ROOFING

CONCRETE

CONCRETE REPAIR

STRUCTURAL STRENGTHENING



WATERPROOFING

JOINT SEALING

FAÇADE STRUCTURAL ADHESIVES

FLOORING

INDUSTRY

DISTRIBUTION

BUILDING TRUST

FOR MORE INFORMATION:

Visit **www.sikaconcrete.co.uk**

WHO WE ARE

Sika Limited and Sika Ireland Limited are part of the global Sika Group, specialising in the manufacture and supply of chemical based products. Sika have a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and the motor vehicle industry. Sika has subsidiaries in 100 countries around the world and manufactures in over 200 factories. With more than 18,000 employees Sika generates annual sales of CHF 6.25 billion (£4.76bn). We are also committed to providing quality, service, safety and environmental care.

In the UK and Ireland, we provide market-leading solutions for concrete, waterproofing, roofing, flooring, refurbishment, sealing & bonding, and industry, and have manufacturing sites in Welwyn Garden City, Preston, Leeds and Dublin with more than 865 employees and a turnover of more than £240 million.

bsi. ISO 9001 Quality Management FM 12504 | ISO 14001 Environmental Management EMS 45308 | OHSAS 18001 Occupational Health & Safety Management OHS 585274

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