

GUIDANCE ON THE USE OF REINFORCEMENT TO CONCRETE TOPPING ABOVE BEAM AND BLOCK FLOORS

The guidance in this document should be applied to all homes registered with NHBC where the foundations are begun on or after 1st May 2017, however, we **strongly encourage** it to be adopted at the earliest opportunity.


This guidance will be kept under review to take account of additional test data etc. that may become available.

Reinforcement to concrete toppings above suspended beam and block floors (for structural purposes or crack control only)

Table 1 - Floor structure⁽¹⁾ and options for reinforcement.

	Suspended concrete beam and concrete block floor			
	Micro-fibre (Class I)	Macro-fibre (Class II)	Steel fibre	Steel mesh
a) Load-bearing block with compressive strength $\geq 7\text{N/mm}^2$ or type SR or type RR [Declared by manufacturer]	✓	✓	✓	✓
b) Non load-bearing block	X	✓ ⁽²⁾	? ⁽³⁾	✓
	Suspended concrete beam and EPS/XPS block floor			
	Micro-fibre (Class I)	Macro-fibre (Class II)	Steel fibre	Steel mesh
a) Load-bearing block [Type R2 declared by manufacturer]	✓	✓	✓	✓
b) Non load-bearing block [Type R1 declared by manufacturer]	X	✓ ⁽²⁾	? ⁽³⁾	✓

Notes:

-  Most commonly adopted types of floor construction.
- (1) This guidance is applicable to structural toppings and finishing screeds that are applied above beam and block floors, or where the beam and block floor is overlaid with insulation.
- (2) 3rd party certification or test evidence acceptable to NHBC is required.
- (3) 3rd party certification or test evidence acceptable to NHBC is required.
Note: At the time of writing, NHBC are not aware of any products that hold suitable certification or test evidence for use in this situation.
- ✓ Acceptable to NHBC when used in accordance with manufacturer's technical literature, British Standards, 3rd party certification or test evidence, as applicable.
- X Not acceptable to NHBC. The structural capacity of concrete toppings reinforced with micro-fibres have not been verified to the satisfaction of NHBC, and are not supported by manufacturers' technical literature.
- ? May be acceptable to NHBC. Refer to note (3).