

# TOPFORCE

*Contractor Guidelines*



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*The objective of these guidelines is to provide the contractor with advice on how best to pump, place, compact and finish concrete floors containing macro synthetic fibre or steel fibre reinforcement.*

## CONCRETE PUMPING

**1.1** Topforce fibre reinforced concrete can be designed upon request with optimum proportions of constituent materials to facilitate pumping.

**1.2** On arrival at site the mixer truck will discharge the Topforce concrete into the pump hopper at a suitable consistency of at least S3. The consistency should be high enough to allow the Topforce concrete to fall through the apertures of the grill covering the hopper without “stacking up”. If the consistency of the concrete is too high this may lead to an increased risk of segregation in the pump line, particularly when pumping has ceased during concrete truck changeovers.

**1.3** Tarmac will always endeavour to work closely with contractors concerning concrete consistency

## 2. CONCRETE LAYING, COMPACTING AND FINISHING OPERATIONS

**2.1** Once the Topforce has been pumped or poured into the structure it should be levelled, compacted and finished. Because of the presence of a large number of fibres in Topforce, the concrete may appear to be over cohesive and have insufficient consistency. This is normal and the concrete does not need to be adjusted by the addition of more water.

**2.2** In order to minimise the number of surface fibres it is important the paste is brought to the surface of the concrete using a mechanical vibration compaction method. A ‘Magi Screed’ is particularly suited to this. If these methods of applying some form of surface vibration to the Topforce concrete are not used, then a high number of fibres will appear at the surface. This may not be an issue if the concrete floor is being covered by insulation etc.

All types of concrete finish can be achieved when using Topforce. Depending on the type of finish required fibres can potentially be visible on the surface on the concrete. The fibres on the surface account for minimal number of the total fibres within the slab but continue to contribute to the three dimensional crack control system supplied within the Topforce. If visual appearance is important, your local Tarmac Technical Team can advise on how best to achieve this.

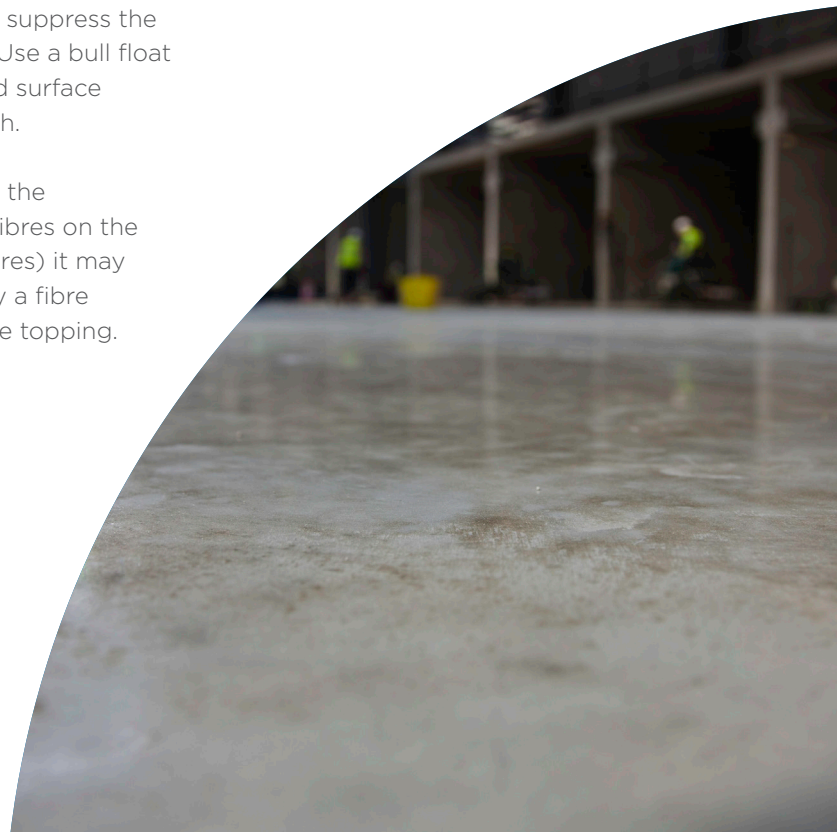
**2.3** After compaction with the 'Magi Screed', an easy float (bull float) is usually passed over the surface to complete finishing operations. If a power-float surface has been specified, the surface of the concrete floor is initially finished by using a 'panning' operation. This is followed by a power-float (and often power-trowel) using a walk behind or ride-on machine.

**2.4** Once Topforce is levelled, compacted and finished, it is cured appropriate to the application, e.g. DPM, spray-on curing compound etc. This will reduce the potential for cracking and enhance the surface durability.

**2.5** To achieve a brushed finish, compact the concrete using a mechanical vibrator. A power-float with a pan fitted should be used to close the surface and suppress the fibres into the paste. Use a bull float to ensure a flat closed surface and finish with a brush.

**2.6** To further reduce the potential number of fibres on the surface (only steel fibres) it may be necessary to apply a fibre suppressant dry shake topping.

For further information visit [tarmac.com/contact](https://www.tarmac.com/contact) or email [topforce@tarmac.com](mailto:topforce@tarmac.com)





T3 Tarmac Ground Floor T3 Trinity Park  
Bickenhill Lane Birmingham B37 7ES  
For more details visit [tarmac.com/contact](http://tarmac.com/contact)

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