

User Guidelines

Durus® S400

Structural toppings
for Beam & Block flooring systems

Flooring
Ready Mixers
UK

Structural topping specification for Beam & Block flooring systems as approved by the NHBC

- **Structural toppings Beam & Block flooring systems**
- **Durus S400**
- **Ready Mixers**
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This document is intended as a step by step guide to help ready mix companies to supply the correct concrete mix for the structural topping of NHBC approved flooring systems.

Concrete mix

The concrete mix is specified as a **C25/30** concrete with a maximum aggregate size of 10 mm and **4 Kg/M³ of Durus S400**. The concrete should have a minimum sand content of **47.5 %** which will aid with the placing and finishing of the fibre entrained concrete mix.



Durus S400 macro fibre concrete mix

Fibre type

The only approved fibre for this system is **Durus S400** which is to be dosed at **4 kg/m³** of concrete. This fibre complies with BS EN 14889-2 : 2006 and is accredited by the BBA who are the notified body and they have issued a certificate of constancy of performance 0836- CPR-14 / P006.



Fibre type Durus S400

Workability

The company tasked with actually laying and finishing the concrete topping will specify the workability. In a separate document aimed at these companies we have suggested that they specify one of the following:

- Flowing concrete: **Slump Flow SF1, SF2**
- Normal concrete: we suggest a target slump of consistence **Class S3 (100 -150 mm) or S4 (160 -210 mm)**

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



Trial Mixes are advisable.

Preparation for fibre concrete

We recommend that trials are carried out in advance to ensure that you are able to provide the contractor with a suitable Durus S400 entrained concrete mix that meets the customers' expectations.

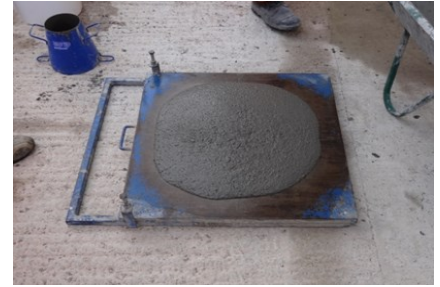
We recommend that if you don't stock the **Durus S400** at your plant that you ensure that your order for fibres is placed at least **three working days** before your concrete is to be supplied.

Batching

Adfil have batching guides for the correct methods of mixing fibre concrete. These are available via our website www.adfil.co.uk or by going onto YouTube and searching Adfil fibre batching.

As a brief guide to batching Durus S400 in a **dry batch plant** the fibres should be added as the last ingredient at a **rate of one 4 Kg bag every 30 seconds**. The concrete should then be mixed for at least 70 drum revolutions prior to discharge.

For a **wet batch plant** the fibres should be added into the mixer in a safe manner. This has been done in the past via a conveyor belt or directly into the mixer via an access hatch.



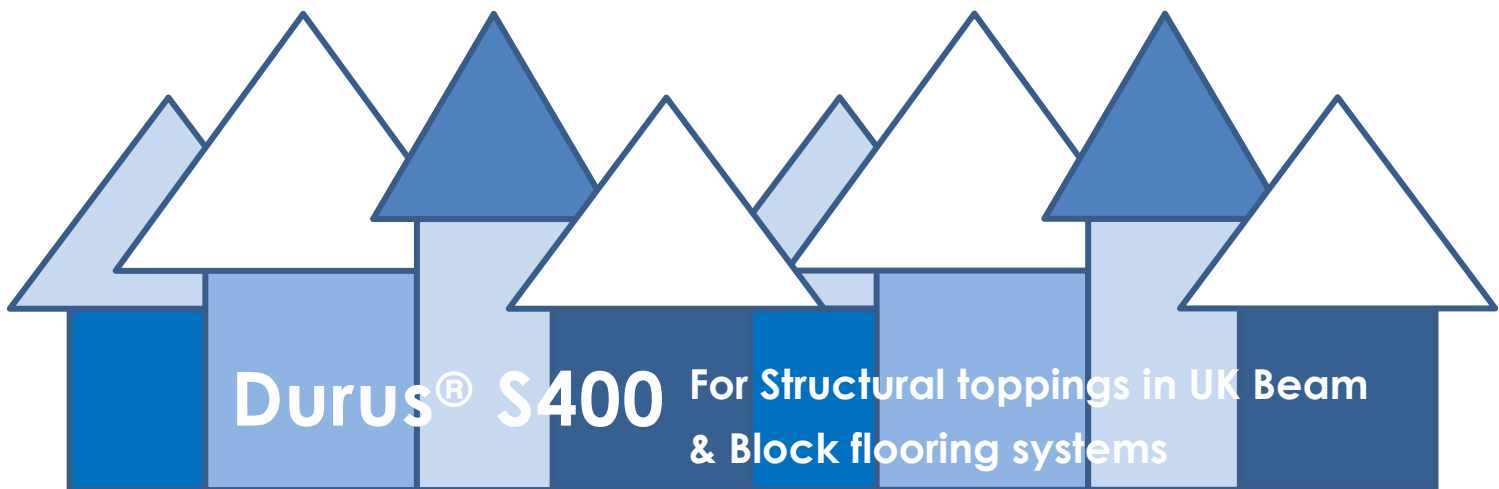
Concrete Flow test to ensure workability



Fibres going up the conveyor belt



Durus S400 going on with the sand and aggregates. 1 Bag every 30 seconds



Durus® S400 For Structural toppings in UK Beam & Block flooring systems

