

## Macro synthetic fibres for cementitious systems

### Description of Product

RHEOFIBRE® S200 is a pioneering new fibre that is now part of BASF's range of synthetic fibres. The macro synthetic fibre has been designed to replace traditional steel reinforcement for a wide range of construction applications with the benefits of increased performance, reduced costs and health and safety advantages.

RHEOFIBRE® S200 has been specifically formulated for use in improving the post crack load carrying capacity of ground supported concrete slabs. Testing completed to date includes notched beam tests to NBN EN 14651 and centrally loaded round panels in accordance to ASTM C1550-05.

### Fields of Application

RHEOFIBRE® S200 can be used in many construction applications. They include:

- Internal floor slabs.
- External hardstandings and pavements.
- Precast concrete elements.
- Agricultural waste tanks and buildings.
- Marine / coastal defence concrete.
- Sprayed concrete.

### Features and Benefits

RHEOFIBRE® S200 will enhance the toughness of the concrete and alleviate the need for steel mesh when used with the appropriate design and at the recommended dosage.

- Can be used as an alternative to steel reinforcement.
- No risk of RHEOFIBRE® S200 being misplaced.
- Easier and safer to handle than steel reinforcement.
- Reduced labour; no need for cutting, fixing and placing steel mesh.
- Ready mixed concrete trucks can discharge at the "live" edge of the concrete.
- Construction time is decreased.
- Improved green footprint.
- Reduced wear on concrete pumps.
- Does not rust or corroded.
- Offers a 3-Dimensional reinforcement system.

### Technical Data/Typical Properties\*

Specific gravity:	0.91g/cm <sup>3</sup>
Alkali, acid and salt resistance:	High
Fibre type and shape:	Flat tape
Colour:	Natural
Absorption:	Nil
Fibre length:	45mm nominal
Electrical conductivity:	Low
Melting point:	160°C
Diameter in microns	110 microns
Tensile strength	450 N/mm <sup>2</sup> ±15 %
E-modulus	8000 ±15 %
Moisture content	0%

\* Properties listed are only for guidance and are not a guarantee of performance.

**Application Procedure****Dosage Rate**

Typically 2.3 to 5.0kg/m<sup>3</sup>. However, dosage rates are dependent on the specific application. For further advice or before using, contact BASF Construction Chemicals (UK) Technical Services Department.

**Mixing Procedure for RHEOFIBRE<sup>®</sup> S200**

When adding RHEOFIBRE<sup>®</sup> S200 into a concrete mix, careful attention must be taken in the batching and mixing procedure to order to achieve optimum results. Therefore the following procedures are recommended depending on the individual situation:

**Wet Batch Concrete Plants**

For wet batch plants, RHEOFIBRE<sup>®</sup> S200 should be added to the concrete plant mixer with the other concrete ingredients.

If RHEOFIBRE<sup>®</sup> S200 cannot be added to the plant mixer then the fibres should be added to the truck mixer as the first ingredient and then mixed for a minimum of 3 minutes with a minimum of 150 liters, or one third of the total batching water; whichever is greater. The premixed concrete should then be discharged from the plant mixer into the truck mixer.

**Dry Batch Concrete Plants**

For dry batch plants the RHEOFIBRE<sup>®</sup> S200 should be added as the first ingredient into the truck mixer and mixed for a minimum of 3 minutes with a minimum of 150 liters, or one third of the total batching water; whichever is greater. After 3 minutes the other ingredients should be ribbon fed into the truck mixer.

**Mixing RHEOFIBRE<sup>®</sup> S200 and RHEOFIBRE<sup>®</sup> Micro Fibres**

If the concrete mix design specifically requires both RHEOFIBRE<sup>®</sup> S200 and one of our micro monofilament fibres then it is important that the two different fibre types are added to the concrete separately.

RHEOFIBRE<sup>®</sup> S200 should be added as the first ingredient into the truck mixer and then a minimum of 150 liters of water, or one third of the total batching water; whichever is greater.

RHEOFIBRE<sup>®</sup> S200 and the initial batch water should then be mixed for 3 minutes prior to the other ingredients being ribbon fed into the truck mixer.

If possible, it is recommended that before the final batch of concrete is added to the truck then the degradable bags of micro fibre are added into the mixing process.

It should be noted that whichever of the above mixing procedures are strictly adhered to, the truck should mix on full speed for five minutes, or at least 70 drum revolutions, until all ingredients are blended into a homogenous mixture.

For further advice on mixing direction please contact your BASF Construction Chemicals (UK) Technical Services Department

**Storage**

It is recommended that RHEOFIBRE<sup>®</sup> S200 must be stored on a clean surface, in dry conditions, under cover and away from the possibility of damage.

**Packaging**

RHEOFIBRE<sup>®</sup> S200 is packed in 2 x 5kg poly bags per box. A pallet contains 30 boxes.

BASF Construction Chemicals (UK) Ltd,  
P.O. Box 4,  
Earl Road,  
Cheadle,  
Cheshire, SK8 6QG  
Tel: +44 (0) 161 488 5258  
Fax +44 (0) 161 488 5220  
[www.basf-cc.co.uk](http://www.basf-cc.co.uk)

## RHEOFIBRE S200, BASF Construction Chemicals (UK) Limited, Version 2

**Health and Safety**

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

**Spillage**

Chemical products can cause damage; clean spillage immediately.

**DISCLAIMER**

"BASF Construction Chemicals (UK) Limited" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.