

Monofilament macro synthetic fibres for cementitious systems

Description of Product

RHEOFIBRE® S100 is a range of monofilament macro synthetic fibres that are extruded, crimped and then specifically cut into the required lengths for a wide range of concreting applications. It can be used in ready mixed concrete, precast and sprayed concrete applications both above and in underground situations.

The sinusoidal shape improves the bond within the concrete and so reduces pull-out and enhances the concrete's performance. The macro synthetic fibre has been designed to replace traditional steel reinforcement with the benefits of increased performance, reduced costs and health and safety advantages.

RHEOFIBRE® S100 has satisfied the criteria set out in BS 6920: Part 1: 2000 which means that the fibre can be used in concrete that is in contact with water intended for human consumption. The fibre is also non-corrosive and will provide all clients with long-term integrity solutions.

Fields of Application

RHEOFIBRE® S100 can be used in many construction applications. They include:

- Internal floor slabs.
- External hardstandings and pavements.
- Precast concrete elements.
- Agricultural areas.
- Marine/coastal defence concrete.
- Shotcreting applications.

Features and Benefits

RHEOFIBRE® S100 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.
- Easier and safer to handle than steel.
- Construction time is decreased.
- Ready mixed concrete trucks can discharge at the "live" edge of the concrete.
- RHEOFIBRE® S100 cannot be misplaced.
- No need for cutting, fixing and placing of steel mesh.
- Reduced wear on concrete pumps.
- Improved green footprint.
- Does not rust or corrode.
- Offers a 3-Dimensional reinforcement system.

Technical Data/Typical Properties*

Specific gravity:	0.91g/cm ³
Alkali, acid and salt resistance:	High
Fibre type and shape:	Macro / Crimped Monofilament
Colour:	Natural
Absorption:	Nil
Fibre length:	30, 40 or 50mm nominal
Electrical conductivity:	Low
Melting point:	160°C
Diameter in microns	1.0 mm ± 0.1mm
Tensile strength	385 N/mm ² ±15 %
E-modulus	2888 ±15 %
Moisture content	0%

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

Application Procedure**Dosage Rate**

Typically 4.0 to 6.0kg/m³. However, dosage rates are dependent on the specific application. For further advice or before using, contact BASF Construction Chemicals (UK) Technical Services Department.

Mixing Directions

RHEOFIBRE[®] S100 is best dispersed when added to a forced action pan mixer, or equivalent, prior to discharging the concrete into a truck. It is suggested that you contact your BASF Construction Chemicals (UK) Technical Services Department before using RHEOFIBRE[®] S100 so that we can assess and advise on the preferred mixing method.

Storage

It is recommended that RHEOFIBRE[®] S100 must be stored on a clean surface, in dry conditions, under cover and away from the possibility of damage.

Packaging

RHEOFIBRE[®] S100 fibres are packed into fibre pucks. These pucks are wrapped in a plastic film which quickly dissolves in water which means that the fibres can be tipped complete with their wrapping directly into the concrete pan mixer or truck mixer.

RHEOFIBRE[®] S100 is packed in 12kg plain boxes. A pallet contains 81 boxes.

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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.