ADFIL
Construction Fibres

# DURUS® S500

## NEXT GENERATION MACRO SYNTHETIC FIBRE

**Engineered to replace steel mesh or steel fibres in precast and sprayed concrete, ground supported internal slabs and external hard standings, Durus S500 is the latest addition to the Adfil range of embossed macro synthetic fibres. Thanks to a unique fibre shape and state-of-the-art extrusion technology applied in the manufacture of Durus S500, this fibre is outperforming its alternatives.**

### Why choose Durus S500?

Durus S500 is the result of extensive in-house research & development and in-depth performance testing by independent laboratories. This fibre is raising the bar for fibre bond within the concrete matrix:

- Greater E-modulus per fibre
- More fibres per $m^3$ due to smaller fibre diameter
- Maximum bond within concrete thanks to innovative fibre design
- Creates enhanced residual flexural strength and toughness in the concrete

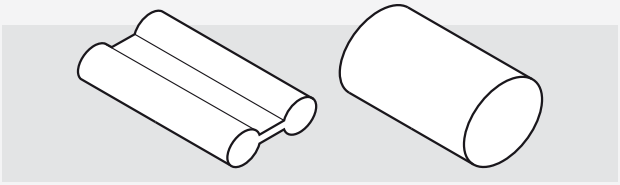
As with all Adfil concrete reinforcement fibres, Durus S500 comes with full technical advice and design support from the experienced Adfil design team.

### Advantages & Benefits

The benefits which macro synthetic fibres bring to construction sites around the world are numerous. Examples include:

- Easy to transport, store and handle
- Improved safety on site
- Increased speed of construction
- High alkali, acid and salt resistance
- Chemically inert and stable
- Easy to finish
- Reduced carbon footprint by over 50%

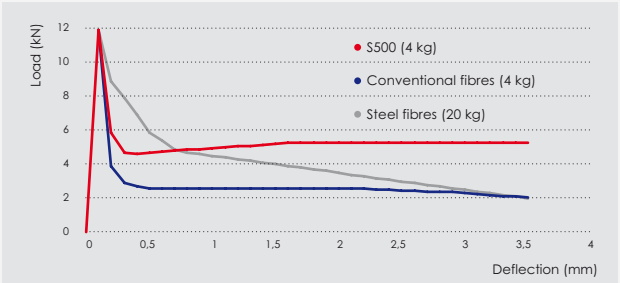
Fig.1 / **Durus S500 vs. conventional fibre**



S500 – New shape  Conventional shape

The Adfil R&D team has engineered Durus S500 into an innovative fibre shape creating an increased specific surface. This design is outperforming conventional round shaped macro synthetic fibres. Another plus is the reduced thickness and enhanced strength of Durus S500 fibres. This gives a significantly increased fibre count per $m^3$, thus improving the concrete reinforcement, when compared to conventional fibres.

Fig. 2 / **Beam test — EN 14651**

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|---|---|---|
| Fibre Length | 48 mm or 55 mm | |
| Fibre Type | Macro monofilament | |
| Shape | Embossed elongated design | |
| Absorption | Zero | |
| Specific Gravity | 0.905 | |
| Electrical Conductivity | Zero | |
| Colour | White | |
| Tensile Strength | 500 MPa | EN 14889-2 |
| Elastic Modulus | 6000 MPa | EN 14889-2 |
| Chloride Content | Zero | |
| S03 Content | Zero | |

## Packaging & Dispersing

Durus S500 fibres are supplied in pucks wrapped in a water soluble film. Packed into paper bags, they can be added directly into the concrete pan or truck mixer. The dosage rates are dependent on the specific application. Adfil offers flexible packing configurations to suit the dosage and type of concrete plant.

## Mixing Directions

The fibre is best dispersed when added to a pan mixer or equivalent, prior to discharging the concrete into a truck. It is suggested that you contact your Adfil representative to discuss the preferred mixing method.

## Storage

Durus S500 must be stored on a clean surface in dry conditions and protected from potential sources of damage.

## Quality Assurance

Durus S500 complies to EN 14889 – 2 : 2006 (EC Certificate of Conformity). The Quality Management Systems of Low & Bonar facilities have been approved to the ISO 9001 Quality Management System Standard. Certificates are available on request. Adfil products are manufactured to exacting standards on technologically advanced production and packaging lines allowing constant monitoring of quality.



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**Adfil. Reinforced concrete reinvented.**

Progress through performance
A **Low&Bonar** solution


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