

# OSCRETE 6mm HD

## Alkali Resistant Glass Fibre

### DESCRIPTION

**Oscrete 6mm HD** fibre is an alkali resistant glass chopped strand fibre which has been specifically engineered for use in concrete and sand/cement screeds.

### APPLICATIONS

**Oscrete 6mm HD** fibre is typically used at low addition levels to prevent cracking and improve the performance of concrete, flooring, renders and screeds. **Oscrete 6mm HD** fibres will incorporate easily into mixes creating a tri-dimensional homogeneous network of reinforcement throughout the cement matrix. **Oscrete 6mm HD** fibre will not protrude through the concrete surface and require no additional finishing procedure. The HD fibre reinforcement is incorporated in the concrete mass and is invisible on the finished surface. **Oscrete 6mm HD** fibre will provide secondary reinforcement in all concrete applications.

### BENEFITS

- High dispersion.
- Invisible on the finished surface.
- Does not corrode.
- Prevention and control of cracking.
- Enhancement of durability.
- Reduced permeability.
- Improved abrasion resistance.
- Impact resistance.

### PROPERTIES

Nature:	Alkali Resistant Glass
Appearance:	Opaque
Specific Gravity:	2.68 g/cm <sup>3</sup>
Fibre Length:	6mm
Absorption:	Nil
Chemical Resistance:	Very High
Modulus of Elasticity:	72 GPa
Tensile Strength:	1,700 MPa
Softening Point:	860°C

### ADDITION RATES

Dosage rates will be dependant on mix design, process, types of aggregates and the desired effect, but typically:

1 x 450g bag per cubic metre

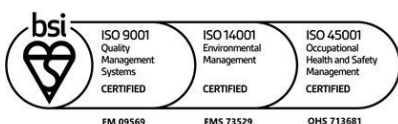
To meet freeze-thaw requirements:

1 x 450g bag per tonne

or 2 x 450g bags per cubic metre

### STANDARDS

**Oscrete 6mm HD fibre** complies with the requirements of ASTM C1116/C, 1666/M-07 and EN 15422.



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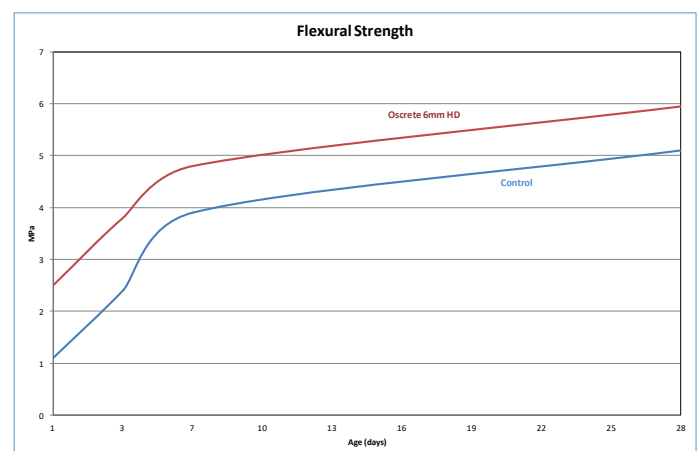
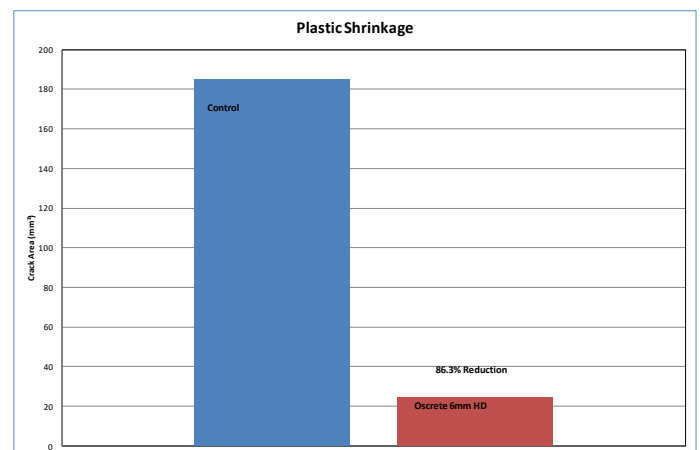
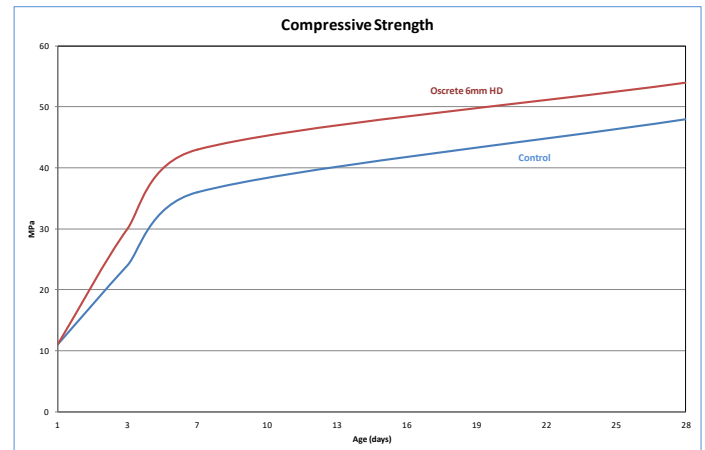
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### TECHNICAL

**Strength:** Compressive and Flexural strength testing was performed at 1, 3, 7 and 28 days. At an early age the benefits of the addition of 0.45kg/m<sup>3</sup> of **Oscrete 6mm HD** fibre are most noticeable (flexural strength >90% higher within the first 2 days). This can have particular benefits in pre-casting, where concrete products may require demoulding after 1 day. Unlike synthetic fibres, the Elastic Modulus of **Oscrete 6mm HD** is significantly greater than that of the hardened concrete, therefore it is able to provide reinforcement not only during the plastic setting process, but also to the hardened concrete. **Homogeneity:** **Oscrete 6mm HD** fibres have a similar specific gravity to concrete, so they do not have a tendency to either float or sink in the concrete during vibration. Tests have shown that **Oscrete 6mm HD** fibres also inhibit the separation of constituent materials, even under vibration, and that segregation of the coarse aggregates and bleeding of the water is reduced, giving a more homogeneous concrete.

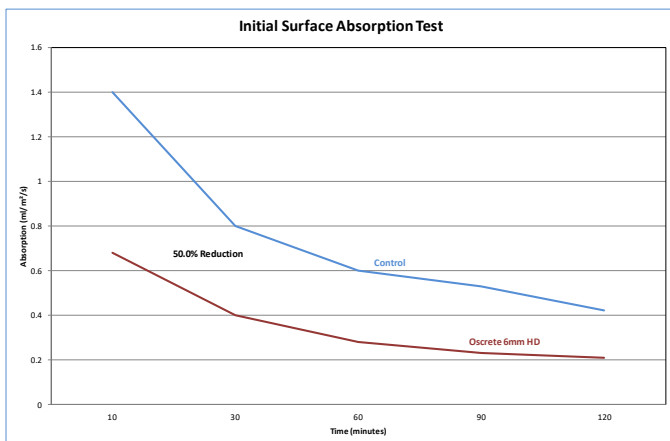
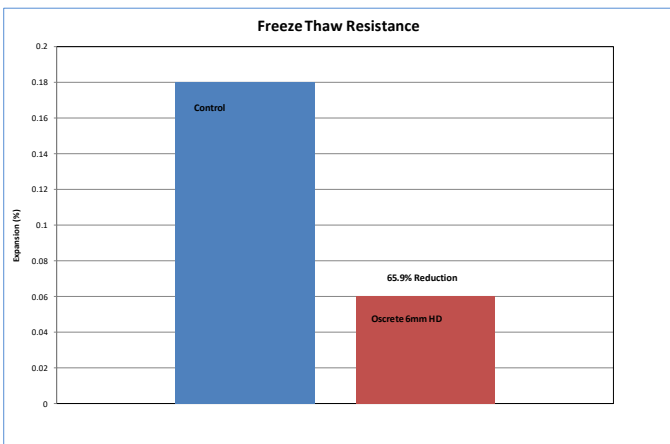
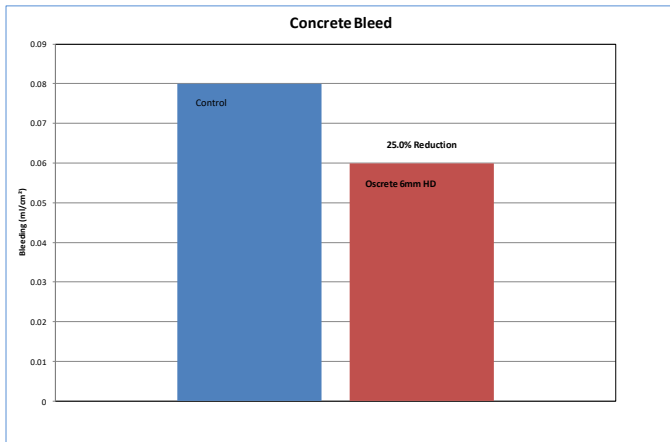
**Resistance to Plastic Shrinkage Cracking:** The reinforcing effect of the fibres and also the reduced bleeding, results in an improved surface to the concrete. A single 0.45kg bag of **Oscrete 6mm HD** fibres represents 99 million reinforcing filaments per bag. Therefore the unreinforced area between filaments where cracks could form is minimised which allows greater cohesive strength of the concrete matrix and enhanced resistance to plastic shrinkage.

### INFORMATION



# OSCRTE 6mm HD

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### Disclaimer

The physical properties quoted are typical, and should not be taken as a specification. The information supplied in our literature is based on data and experience and is given in good faith. Our policy is one of continuous research and development and we reserve the right to update this information at any time; customers should therefore ensure they have the latest issue. Whilst we guarantee the consistent high quality of our products, we have no control over the circumstances in which our materials are used, site conditions or the execution of the work and are therefore unable to accept any liability for any loss or damage which may arise as a result thereof. Materials are supplied in accordance with our standard conditions of sale.

### SUMMARY OF BENEFITS

vs. concrete containing no fibre

- Compressive Strength +13%
- Flexural strength +15%
- Bleeding -25%
- Plastic Shrinkage Cracking -86%
- Permeability -50%
- Freeze / Thaw Expansion -66%

**Compatibility:** Oscrte 6mm HD fibre is compatible with all types of EN 197 cement systems and offers a wide range of benefits particularly in the production of sand/cement screed.

**Storage:** Store the product in a dry environment, moisture ingress will cause the water soluble bags to degrade.

**Handling:** Please refer to the Oscrte 6mm HD fibre Material Safety Data Sheet but in line with normal handling procedures, personal protective equipment should be worn.

**Packaging:** Oscrte 6mm HD fibre is supplied in 450 gram water soluble bags, 30 bags per box.

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