

OSCRETE 12mm HP

Alkali Resistant Glass Fibre

DESCRIPTION

Oscrete 12mm HP fibre is an alkali resistant glass chopped strand fibre which has been specifically engineered for use in concrete and sand/cement screeds.

APPLICATIONS

Oscrete 12mm HP fibre is typically used at low addition levels to prevent cracking and improve the performance of concrete, flooring, renders and screeds. **Oscrete 12mm HP** fibres will incorporate easily into mixes creating a tri-dimensional homogeneous network of reinforcement throughout the cement matrix. **Oscrete 12mm HP** 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 12mm HP** 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 ³
Fibre Length:	12mm
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 600g bag per cubic metre

STANDARDS

Oscrete 12mm HP fibre complies with the requirements of ASTM C1116/C, 1666/M-07 and EN 15422.



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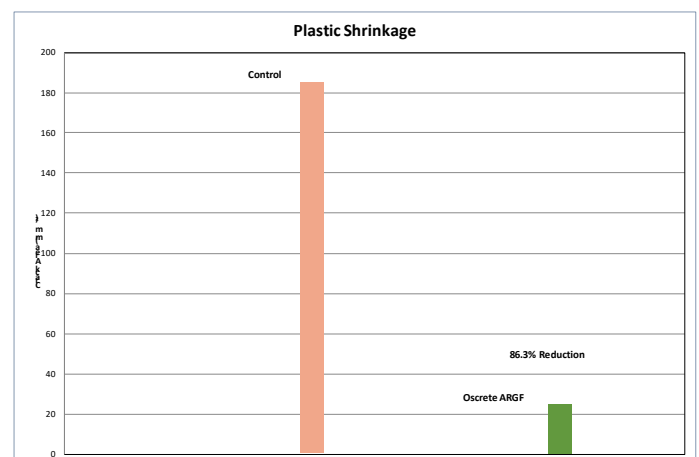
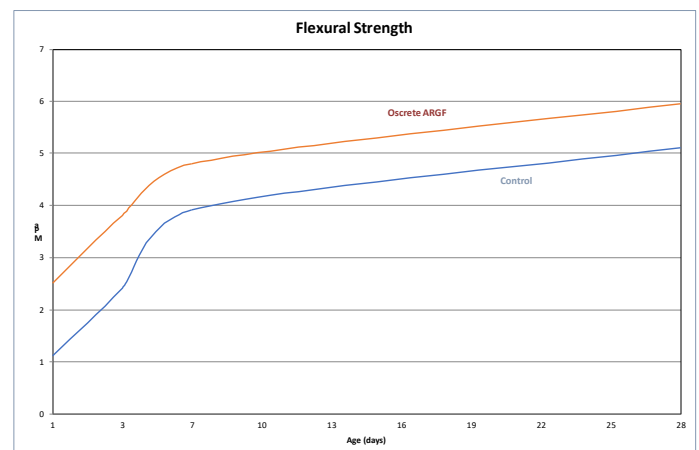
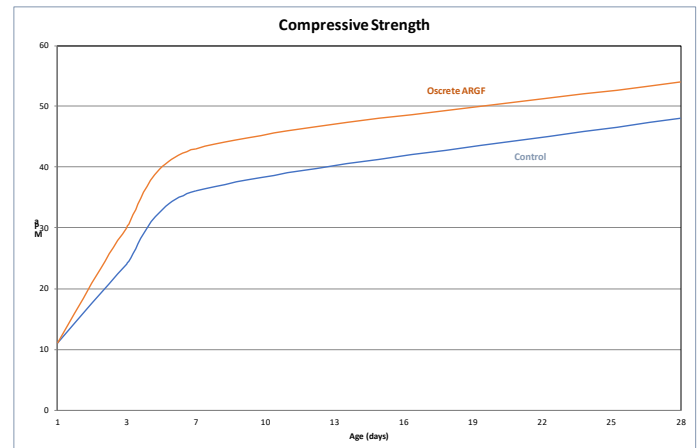
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TECHNICAL

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 0.60kg/m³ of **Oscrete 12mm HP** 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 12mm HP** 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 12mm HP** 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 12mm HP** 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.

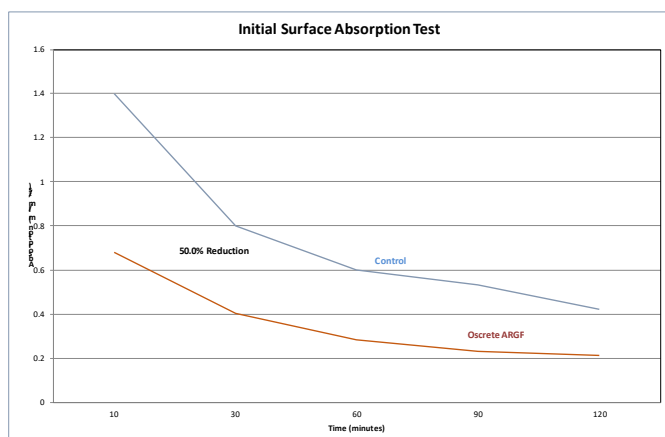
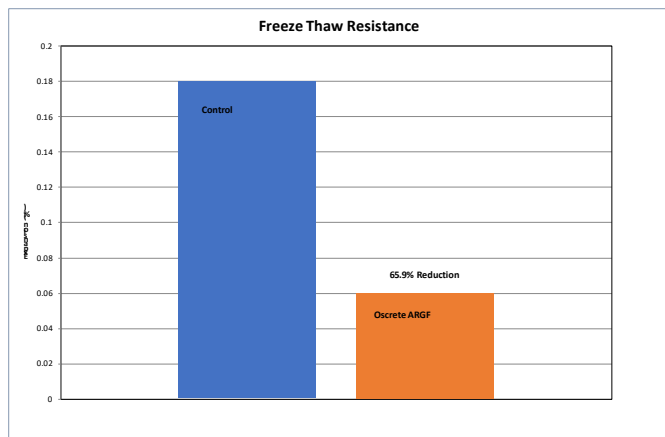
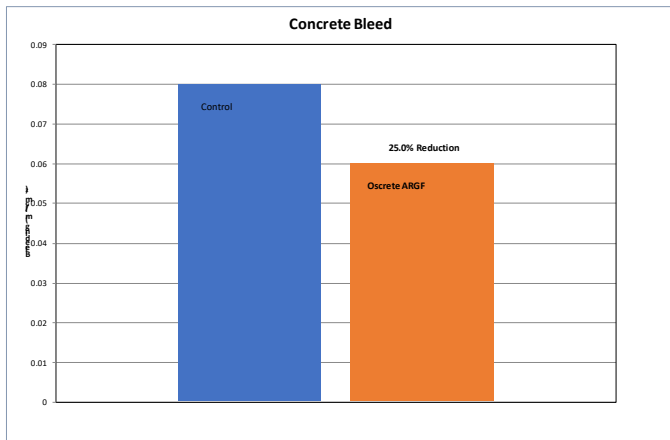
Resistance to Plastic Shrinkage Cracking: The reinforcing effect of the fibres and also the reduced bleeding, results in an improved surface to the concrete. A single 0.60kg bag of **Oscrete 12mm HP** fibres represents 132 million reinforcing filaments per bag. Therefore the unreinforced area between filaments where cracks could form is minimised which allows greater cohesive strength of the concrete matrix and enhanced resistance to plastic shrinkage.

INFORMATION



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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: Oscrete 12mm HP 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 Oscrete 12mm HP fibre Material Safety Data Sheet but in line with normal handling procedures, personal protective equipment should be worn.

Packaging: Oscrete 12mm HP fibre is supplied in 600 gram water soluble bags, 30 bags per box.

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