

FLOWCRETE GFRC ADMIXTURE

High Performance Multi-Functional Admixture for GFRC

Description

Flowcrete GFRC is a unique powdered polymer and plasticiser blend that has been specifically designed to replace the liquid polymer and liquid superplasticiser used in the production of Premix GFRC. Based on new generation dispersing agents and carefully selected polymer blends its molecular structure has been designed to promote exceptional properties.

Comprising integrated powdered polymers, viscosity modifiers and superplasticising systems, Flowcrete GFRC offers the GFRC producers enhanced strength gain, improved flexural strengths, faster demoulding and improved dry curing times than traditional GFRC admixtures and polymers.

Applications

Flowcrete GFRC is primarily used for making free flowing premix GFRC products and will allow a more controlled working life, which is enhanced by improvements in the dry curing process.

Benefits in GFRC

- increased early age compressive strengths
- increased flexural strengths
- reduced shrinkage
- reduced water absorption
- eliminates waste
- lower film form temperature
- health and safety benefits
- improved surface finish

Properties

Nature	Powder
Colour	White
Bulk Density	0.600 g/cm ³
pH	-
Chloride Content	<0.10%
Na ₂ O equivalent	<1.00%

Addition Rates

Dosage rate will be dependent on the mix design, the production process, the types of aggregates and the desired finish but is typically:

150-350 grams per 25 kg cement.

For sprayed GFRC applications please use Spraycrete GFRC which has an increased open life.

Standards

Flowcrete GFRC is produced in accordance with the ISO 9001 Quality Management Standard and the ISO 14001 Environmental Management Standard.

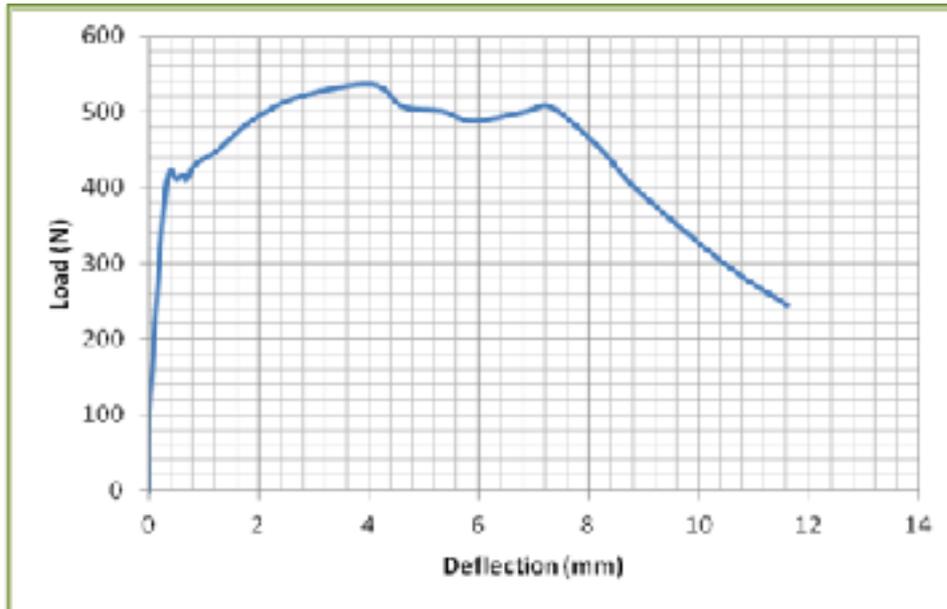
Testing

Flowcrete GFRC has been independently tested to BS EN 1170 parts 5-8.

Technical

The large area under the load-deflection curve indicates greater resilience, ductility (crack control) and impact resistance of the GRC material made with the Flowcrete admixture. The more mature matrix at 28 days age provides greater efficiency of fibre reinforcement leading to higher post-cracking flexural strengthening. The glass fibre reinforcement imparts considerable ductility (crack control) and flexural strengthening to the brittle matrix composite, making it suitable for many applications in buildings. Producers have more latitude to modify concrete mix design, save costs and be more innovative with design possibilities when using a Flowcrete modified GFRC. Greater ductility means the potential for lighter, stronger components which are easier to handle and are less prone to damage in transit and during installation on-site.

The pre-weighed 250g packing provides improved accuracy of dosing, reduced wastage and better inventory control together with a generally cleaner, safer working environment by virtue of the reduction in occurrence of liquid spills and consequent slip hazards.



		Premix	FlowCast	Test Method
Dry Density	kg/m ³	1900 ⁺²⁰⁰ / ₋₂₀₀	2120	EN 1170-6
28 day bending strength				
LOP	MPa	7 +/- 2	8.93	EN 1170-5
MOR	MPa	9 +/- 3	11.44	EN 1170-5
Water Absorption at 24 hours	%	11 +/- 2	7.18	EN 1170-6
Shrinkage	mm/m	1.2 +/- 0.3	0.928	EN 1170-7
Swelling	mm/m	1.2 +/- 0.3	0.709	EN 1170-7

Compatibility

Flowcrete GFRC is compatible with all types of EN 197 cement systems and offers a wide range of benefits particularly in the production of free flowing concrete/grout.

Storage

Flowcrete GFRC should be stored undercover, protected from extreme temperatures and stored unopened within the range 5°C and 30°C. Moisture ingress will cause the product to harden.

Handling

Please refer to the Flowcrete GFRC Material Safety Data Sheet but in line with normal handling procedures, personal protective equipment should be worn.

Packaging

Flowcrete GFRC is available in the following packs: as a loose powdered additive in sealed 15 kg plastic containers and 250 gram plastic sachets supplied in a box containing 56 sachets.

Batching order and mixing procedure

- 1/ Mix cement and water together to produce high viscosity slurry
- 2/ Add Flowcrete and mix to produce low viscosity slurry
- 3/ Add sand whilst mixing
- 4/ Adjust water content (within specification) if necessary to required consistence
- 5/ Slowly mix in fibres

These procedures are a guide and other methods may be employed, however, the admixture **MUST** be added to WETTED cement and **NOT** added to the sand, this will negate the effects of the admixture and the plastic and hardened properties will not be achieved.

Contact the Concrete Lab Technical Department for further information.

info@concretelab.co.uk

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.