# FLOWCAST GRC

## High Performance Multi-Functional Admixture for GRC

### PRODUCT DESCRIPTION

**FlowCast GRC** is an 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 GRC. Based on new generation dispersing agents and carefully selected polymer blends, its molecular structure has been designed to promote exceptional properties.

Comprising of integrated powdered polymers, viscosity modifiers and superplasticising systems, **FlowCast GRC** offers GRC producers enhanced strength gain, improved LOP and MOR, faster demoulding and improved dry curing times than traditional GRC admixtures and polymers.

### APPLICATIONS

**FlowCast GRC** is primarily used for making free flowing premix GRC products and will allow a more controlled working life, which is enhanced by improvements in the dry cure process.

### BENEFITS

- Increased early age compressive strengths.
- Increased LOP.
- Increased MOR.
- Reduced shrinkage.
- Reduced water absorption.
- Eliminates waste.
- Lower film form temperature.
- Health & Safety benefits.
- Improved surface finish.

### PROPERTIES

| | |
|---|---|
| Nature: | Powder |
| Appearance: | White |
| Density: | approx. 0.600 g/cm³ |
| Chloride Content: | < 0.10% |
| Na2O equivalent: | <1.00% |

### ADDITION RATES

Dosage rate will be dependant on the mix design and the production process, but typically:

150—350 grams per 25kg cement.

For sprayed GRC applications please use **SprayCast GRC** which has an increased open life.

### STANDARDS

**FlowCast GRC** is produced in accordance with the ISO 9001 Quality Management Standard and the ISO 14001 Environmental Management Standard.

### TESTING

**FlowCast GRC** has been independently tested to BS EN 1170 parts 5—8.

bsi ISO 9001 Quality Management Systems CERTIFIED FM 09569 ISO 14001 Environmental Management CERTIFIED EMS 73529 ISO 45001 Occupational Health and Safety Management CERTIFIED OHS 713681

OSCRETE

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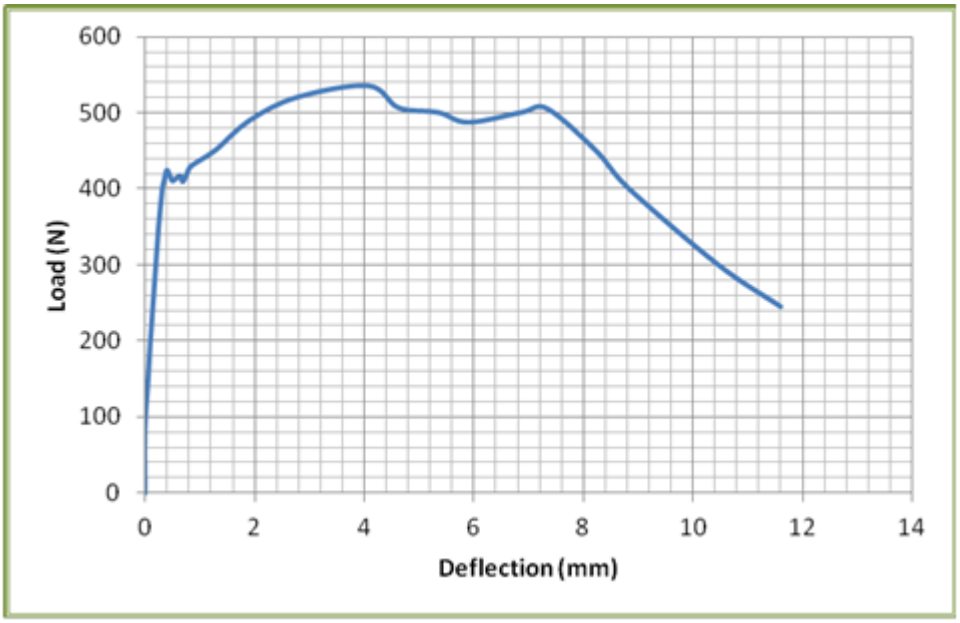
### TECHNICAL

The large area under the load deflection curve indicates greater resilience, ductility (crack control) and impact resistance of the GRC material made with **FlowCast GRC** admixture. The more mature matrix at 28 days provides greater efficiency of fibre reinforcement leading to higher post cracking flexural strengthening. The glass fibre reinforcement imparts considerable ductility 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 **FlowCast GRC** modified GRC. 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 use of **FlowCast GRC** powder provides accurate 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/m³ | 1900 $^{+300}/_{-200}$ | 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 +/- 3 | 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 |

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### COMPATIBILITY

**FlowCast GRC** 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

**FlowCast GRC** should be stored undercover, protected from extreme temperature, frost and direct sunlight, the product has a minimum shelf life of 9 months. Moisture ingress will cause the product to harden.

### HANDLING

Please refer to the **FlowCast GRC** material safety data sheet but in line with normal handling procedures, personal protective equipment should be worn.

### PACKAGING

**FlowCast GRC** is supplied as a loose powdered additive in sealed 15kg plastic tubs and in 250g sachets supplied in a box containing 56 sachets.

### BATCHING ORDER AND MIXING PROCEDURE

1. Mix cement and water together to produce a high viscosity slurry.
2. Add **FlowCast GRC** and mix to produce a low viscosity slurry.
3. Add sand whilst mixing.
4. Adjust water content (within specification) and if necessary adjust to the required consistency.
5. Slowly mix in the 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 as this will negate the effects of the admixture affecting both the plastic and hardened properties.

Please consult the OSCRETE technical department for advice on admixture selection.

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PDS 7611 Rev 08 02/01/2024