

# BluCem RF20

## RAPID FLOOR SELF-LEVELLING CEMENTITIOUS GROUT

BluCem RF20 is a one component cementitious powder which requires only the addition of water to form a self-levelling cementitious grout.

BluCem RF20 has been designed as a level finishing, non segregating, feathered edge finish product suitable for civil engineering applications. BluCem RF20 incorporates advanced superplasticisers and polymers to form a C Class dual shrinkage control, high strength, very high bond, scratch resistant and durable cementitious grout.

### Application Advantages

- Easy to apply
- Self healing
- Level finishing
- Non segregating
- Feathered edge finish

### Lifecycle Advantages

- Type C Class, dual shrinkage control
- High strength
- Very high bond
- Scratch resistant
- Durable
- Outdoor and indoor use

### About the Product

BluCem RF20 is an extremely hard wearing, early strength, self-levelling grout manufactured from specially selected cements, aggregates and additives. This allows the product to be used in hard wearing applications and ensures a durable and long lasting installation. BluCem RF20 is a leader in its class of floor topping materials with its exceptionally high scratch resistance, strength and bond. It is the reliable choice for all challenging floor topping and repair applications.

### Application Solutions

- Concrete repair
- Re-levelling finished concrete
- Repair of rain damaged concrete
- Floor repair and topping
- Joint repairs
- Underlays

### Project Specification Clause

RAPID FLOOR SELF-LEVELLING CEMENTITIOUS GROUT - The self-levelling cementitious grout used for this project shall be a one component cementitious powder which requires only the addition of water to form a durable self-levelling product. It shall be a pre-blended product that has independent testing to validate the performance outlined in the technical data table on the following pages. BluCem RF20 manufactured by Bluey Technologies or equivalent shall be accepted.

### Project Examples

Airport construction, bridge repair, building repairs, factory floors, car park decks, jetty construction and repair, concrete structures, retail outlets, road repairs, runway repairs and shutdowns, warehouse floors.



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### Application Specification

#### CONCRETE PREPARATION

- 1.1 All defective host substrate must be removed prior to application. Defective material includes cracked or structurally weakened surfaces and also chloride contaminated and carbonated concrete. A concrete corrosion expert must be consulted for critical projects or structural applications.
- 1.2 Host concrete must be roughened and aggregate exposed to ensure good bond. High pressure water blasting, mechanical chipping or shot blasting of the surface is recommended for this purpose.
- 1.3 All surfaces must be free of dust, oils and surface contaminants. This will require steam cleaning or high pressure water blasting if site conditions permit.
- 1.4 Priming using BluCem API0 primer is recommended. Application of BluCem RF20 must commence within 4 hours of primer application

#### MIXING

- 2.1 Measure and place 80% of the specified volume of potable water to the high shear mixing vessel. Start mixer and slowly add BluCem RF20 powder. If powder addition is too fast then large lumps will form and final mix will be slow reaching uniform consistency. Following addition of all powder, mix for 1 - 2 minutes or until uniform consistency then add final 20% of potable water. More or less water may be added within the ratio limits specified on this data sheet. Do not mix more material than can be placed in 10 minutes.

#### PUMPING

- 3.1 Once the grout has been mixed you need an effective pumping method to deliver it to the area of application. Various models of batch mixers and continuous mixers are available for use, all with varying specifications. It is important to match your application's specifics with the capabilities of the mixer and pump. Bluey Technologies are able to recommend the right mixer for your project.
- 3.2 Prior to pumping grout, rinse the mixer and charge the pump hopper with sufficient water to flush and cool the pump and all grout lines thoroughly. Check to ensure that all lines and hoses are clear and unobstructed. Once grout is mixed, it is important to keep it agitated continuously prior to pumping. Although, this product has a long pot life, if the grout is allowed to sit then it will 'gel' and may become more difficult to pump.
- 3.3 Once the site is ready for grout placement, commence pumping. It is important to pump continuously and avoid the formation of cold joints.
- 3.4 Following completion, dispose of excess production material in consideration of the environment. Carefully wash out mixer tanks and agitators into the pump hopper and pump the resulting washout material through the grout hoses to a suitable disposal site. Drain any water out of the lines and hoses. Clean down the machinery and surrounding areas.

#### APPLICATION TEMPERATURES

- 4.1 As with the water temperature, the higher the air temperature the more quickly the grout hydrates and sets. Bluey Technologies specify mixing times and set times at an ambient temperature of 20°C. These times vary with temperature fluctuations, and adjustments will be required to compensate for this. Exposing the pumping hoses to the sun on a hot day accelerates the product's set time. In some cases it may be necessary to cool the material, the mix water, or even the hose itself during the process and pre-planning the storage of all materials to keep the temperature as low as possible.

#### APPLICATION

- 5.1 The product may be poured or pumped into place. Check formwork for leaks prior to mixing and application of grout. Do not exceed the maximum application thicknesses specified in this data sheet for any wet layer. Consult Bluey Technologies for further information about aggregate addition for large volume pours. BluCem RF20 does not require trowelling or finishing with air-release rollers. The product has been specially formulated to provide surface finish independent of manual intervention.

#### CURING

- 6.1 No special curing techniques are required but it is important to minimise air flow across the surface for at least 24 hours.

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### Product Data

Please refer to Important Notice on following page

Packaging	20kg bags
Water Addition	4.8 - 6.5 litres of water per 20kg bag
Yield	~13.5 litres per 20kg bag
Application Thickness	Minimum 0mm (feather edge) Maximum 40mm in one application
Pump Life	10 minutes @ 20°C

TESTED CHARACTERISTIC	STANDARD	RESULT
Compressive Strength	AS1479.2 Appendix A	20MPa @ 24 hours 45MPa @ 7 days 50MPa @ 28 days
Flexural Strength	AS1012.11	5MPa @ 28 days
Setting Time	AS1012.18	Initial set - 15 minutes @ 20°C Final set - 2 hours @ 20°C

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### Contact Bluey

#### HEAD OFFICE QLD

1300 0 BLUEY | [qld@bluey.com.au](mailto:qld@bluey.com.au)

[bluey.com.au](http://bluey.com.au)

#### NSW

[nsw@bluey.com.au](mailto:nsw@bluey.com.au)

#### VIC

[vic@bluey.com.au](mailto:vic@bluey.com.au)

#### SA

[sa@bluey.com.au](mailto:sa@bluey.com.au)

#### WA

[wa@bluey.com.au](mailto:wa@bluey.com.au)

#### TAS

[tas@bluey.com.au](mailto:tas@bluey.com.au)

#### ACT

[act@bluey.com.au](mailto:act@bluey.com.au)

#### NT

[nt@bluey.com.au](mailto:nt@bluey.com.au)

#### NZ

[nz@bluey.com.au](mailto:nz@bluey.com.au)

#### UK/EUROPE

[bluey@bluey.ie](mailto:bluey@bluey.ie)

#### ASIA PACIFIC

[sales\\_sg@quicseal.com](mailto:sales_sg@quicseal.com)

### IMPORTANT NOTICE

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