

# TECHNICAL INFORMATION

## BLUE CIRCLE MICROCEM®

### Controlled fineness cement **Bulk Product Data Sheet**

The Blue Circle MICROCEM® range of controlled-fineness cements is produced by finely grinding Portland cement clinker with small quantities of set-regulating additives. Blue Circle MICROCEM is produced in a controlled factory environment at our Barnstone plant under an ISO 9001 accredited Quality Management System.

#### APPLICATIONS

Blue Circle MICROCEM is suitable for a range of applications, such as, cement-based repair compounds, injection grouting and soil stabilisation. Four Blue Circle MICROCEM products are available:

- Blue Circle MICROCEM 550: Fine cement, combining high-fineness with good early strength development. Suitable for use in cement-based adhesives, repair compounds, flowing screeds and grouts.
- Blue Circle MICROCEM 650: Superfine cement (finer than Blue Circle MICROCEM 550) suitable for injection into joints, cracks, fissures and soils to produce a water-tight mass of grouted rock or soil.
- Blue Circle MICROCEM 650 SR: Similar fineness to Blue Circle MICROCEM 650, but slower setting and based on sulfate-resisting clinker. Particularly suited for use in hot climates.

- Blue Circle MICROCEM 900: An ultrafine product (finer than Blue Circle MICROCEM 650), suitable for injection into hard rock, tight joints and fissures.

#### PROPERTIES

The features of the Blue Circle MICROCEM range of cements include:

- Based on Portland cement clinker with carefully selected set regulating admixtures. Contain no other additions.
- Controlled high-fineness and narrow particle size distribution.
- Low bleed.
- Excellent penetration and waterproofing, particularly in tight fissures and low-porosity soils.
- Controlled setting.
- High ultimate strength.
- Good long-term durability.
- Compatible with most admixture types.
- Can replace chemical grouts in some situations.
- Can be used with standard cement injection equipment.
- No hazardous fumes, leading to a safer working environment.



## TABLE OF TYPICAL PROPERTIES

(for guidance only, not to be used for specification purposes)

Property	Units	Blue Circle Microcem 550	Blue Circle Microcem 650	Blue Circle Microcem 650 SR	Blue Circle Microcem 900
Initial Setting Time (BS EN 196-3)	(min)	85 to 220	N/A		N/A
Initial Setting Time (@1:1 water:cement and 20 °C)	(min)	N/A	50 to 180	N/A	50 to 150
Bleed	(%)	<3	<3	<3	<3
Typical Particle Size Distribution					
D <sub>95</sub>	(µm)	30	20	20	12
D <sub>50</sub>	(µm)	8	6	6	3.5
D <sub>25</sub>	(µm)	5	3	3	2
Chromium (at end of stated shelf life)	(ppm)	<2	<2	<2	<2

## CONDITIONS OF USE

- Blue Circle MICROCEM-based grout should always be mixed in a high efficiency mixer (preferably a colloidal mixer).
- Do not over-mix as this may result in increased grout temperatures and premature setting.
- Keep under constant agitation prior to injection, but do not keep in agitator for more than 30-40 minutes.
- Open time may be increased with proprietary admixtures (use in accordance with admixture manufacturers instructions).

Please note:

- Blue Circle MICROCEM is manufactured from natural materials and slight differences in colour may be observed.
- Blue Circle MICROCEM should be used by operatives familiar with the characteristics of the material and its application methods.
- Tarmac Cement cannot be held responsible for any problems associate with incorrect specification or poor workmanship.

**The content of this data sheet is correct at the date of publication. Please check our website: [www.tarmac-bluecircle.co.uk/bulk](http://www.tarmac-bluecircle.co.uk/bulk) for any subsequent changes.**

## For further information

[www.tarmac-bluecircle.co.uk/bulk](http://www.tarmac-bluecircle.co.uk/bulk)

**Technical helpdesk**

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**Tel: 0845 812 6300**

**E-mail [customerservice@tarmac.com](mailto:customerservice@tarmac.com)**

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## AVAILABILITY

Blue Circle MICROCEM is available in bulk tankers, 20 kg plastic bags or in 1000 kg bags from our Barnstone works. Details of availability can be obtained from the contacts listed below.

## STORAGE

Blue Circle MICROCEM is packed in our innovative plastic packaging and can be stored, unopened, in either indoor or outdoor conditions. 1000 kg bags should be stored clear of the ground and in cool dry conditions. Information on the maximum storage period can be found on the bag.

## HEALTH AND SAFETY

Contact between cement powder and body fluids (eg, sweat and eye fluids) may cause irritation, dermatitis or burns. For further information, including the control of hexavalent chromium, refer to the Tarmac Cement Health and Safety Information Sheet for Portland cements.

## TECHNICAL SUPPORT

Further information or specification advice on Blue Circle MICROCEM and the full range of Tarmac cements can be obtained from the contacts listed below.

The information in this data sheet is accurate at the time of printing, but Tarmac reserves the right to amend details as part of its product development programme. The information given in this technical data sheet is based on our current knowledge and is intended to provide general notes on our products and their uses. Tarmac endeavour to ensure that the information given is accurate, but accept no liability for its use or its suitability for particular application because of the product being used by the third party without our supervision. Any existing intellectual property right must be observed.