# **Blue Circle Ordinary Portland Cement**

## (CEM | 42,5N)

Blue Circle Ordinary Portland Cement (OPC) is a general purpose packed cement which complies with the requirements of BS EN 197-1 CEM 1 42,5N



**TRADE RANGE** 

#### **BLUE CIRCLE ORDINARY PORTLAND CEMENT (OPC)**

A general purpose packed cement



Blue Circle Ordinary Portland Cement is a quality assured cement carrying both CE Marking and the British Standards Institution Kitemark with independent third party certification.

### **Applications**

Blue Circle Ordinary Portland is a general purpose cement that is suitable for use in concrete, mortars, renders, screeds and grouts.

To achieve optimum performance from Blue Circle Ordinary Portland Cement in concrete, mortar, render, screed or grout, it is essential that it are correctly specified and used. Attention should be given to an adequate cement content, a water/cement ratio as low as possible consistent with satisfactory placing and thorough compaction and to adequate curing. Reference should be made to the following documents:

- BS 5328 Specifying concrete.
- BS 5628: Part 3 Use of Masonry.



Blue Circle Sulfacrete should be used where increased resistance to sulfates is required.

Blue Circle Masonry Cement may be used as an alternative to produce high performance mortars.

#### **Properties**

- a) Grey colour.
- b) Consistent strength meeting all the conformity criteria in BS EN 197-1.
- c) Compatible with admixtures such as air-entraining agents and workability aids, with cement replacement materials such as fly ash and ground granulated blastfurnace slag and with pigments. Trial mixes are recommended to determine the optimum mix proportions.

#### **Availability**

Blue Circle Ordinary Portland Cement is available in 25 kg bags throughout the United Kingdom.



Photograph courtesy of the Concrete Society

Blue Circle Ordinary Portland Cement is supplied on pallets, 1.2 x 1.0m, 10 bags per layer, 6 layers high. Weight 1.5 tonnes per pallet.

# **Technical Support**

Further information or specification advice on Blue Circle Ordinary Portland Cement and the full range of Blue Circle cements can be obtained from the contacts listed overleaf.

# **Health and Safety**

Contact between cement powder and body fluids (eg sweat and eye fluids) may cause irritation, dermatitis or burns. Cement is classified as an irritant under the Chemicals (Hazard Information and Packaging) Regulations. For further information refer to the Blue Circle Health and Safety Information Sheet.



Typical properties		
Surface area	(m²/kg)	290 to 390
Setting time – initial	(mins)	80 to 200
EN196-1 Mortar – compressive strength		
2 day	(N/mm <sup>2</sup> )	21 to 31
/ day	$(N/mm^2)$	40 to 50
28 day	(IN/mm²)	52 to 62
Apparent particle density	(kg/m³)	3080 to 3180
Bulk density	(kg/m³) Aerated Settled	1000 to 1300 1300 to 1450
Colour	Y value	27.5 to 37.5
Sulfate	SO <sub>3</sub> (%)	2.5 to 3.5
Chloride	CI (%)	Less than 0.03
Alkali	Eq Na <sub>2</sub> O (%)	0.4 to 0.85
Tricalcium Silicate	C <sub>3</sub> S (%)	40.0 to 60.0
Dicalcium Silicate	C <sub>2</sub> S (%)	12.5 to 30.0
Tricalcium Aluminate	C <sub>3</sub> A (%)	7.0 to 12.0
Tetracalcium Aluminoferrite	C <sub>4</sub> AF (%)	6.0 to 10.0

Blue Circle Ordinary Portland cement is predominantly compounds of calcium silicate and calcium aluminate with a small proportion of gypsum. It is produced by burning or sintering, at a temperature in excess of 1400°C, a finely ground mixture of raw materials which contain predominantly calcium carbonate, aluminium oxide, silica and iron oxide. The cooled clinker formed is ground under controlled conditions with the addition of typically 5% gypsum.

### For further information:

Technical helpline	0870 609 0011	
E-mail	info@lafargecement.co.uk	
Customer services	0870 600 0203	
E-mail customerservice@lafargecement.co.uk		
Facsimile	01635 280250	
Website	www.lafargecement.co.uk	
Lafarge Cement United Kingdom, Manor Court, Chilton, Oxon OX11 ORN		



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