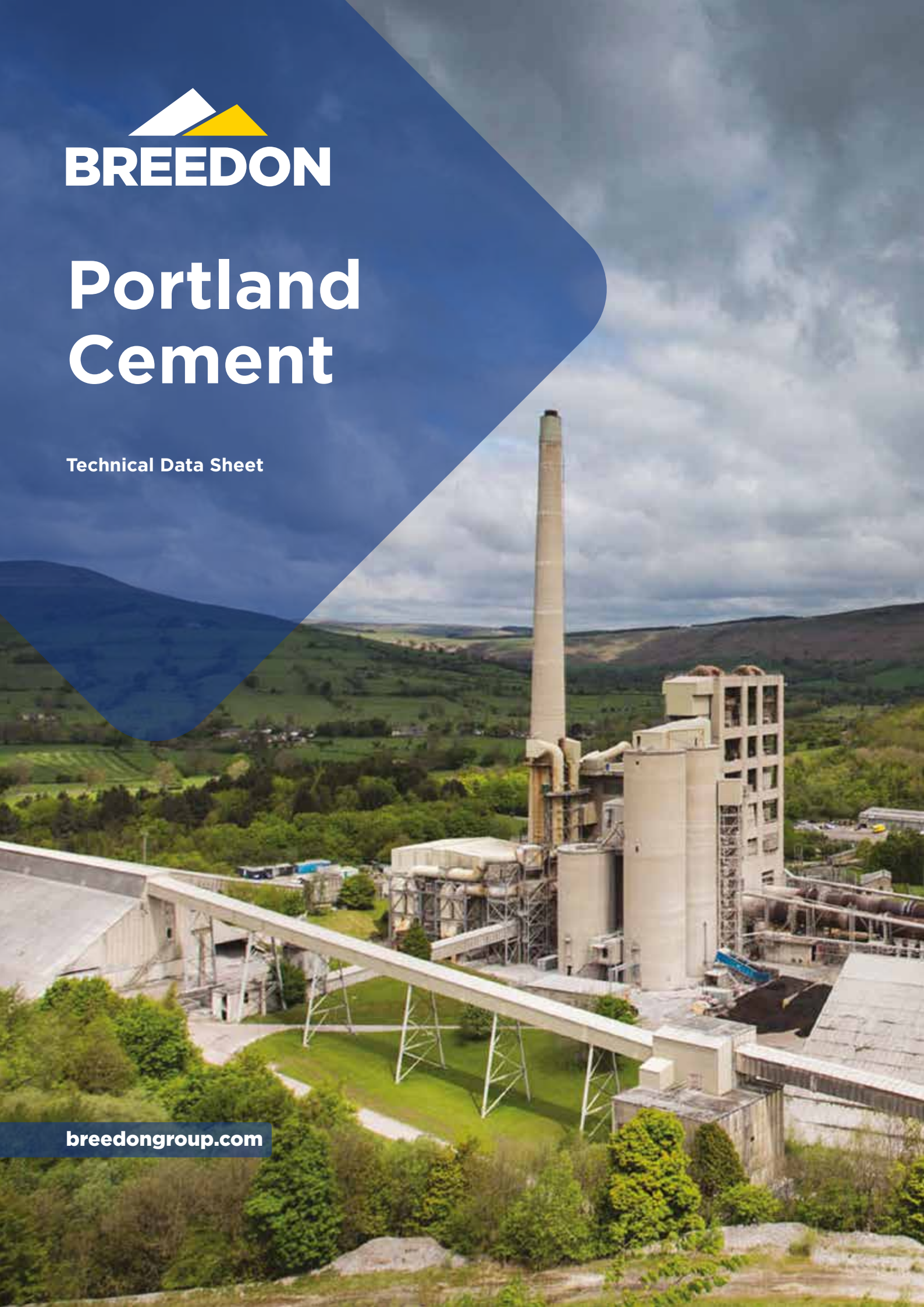




# Portland Cement

Technical Data Sheet

[breedongroup.com](https://breedongroup.com)



# Portland Cement

## CEM I 52,5N

**Portland Cement is quality assured with independent third party certification and carries a CE mark. It offers high levels of workability in ready-mixed concrete, mortars and soil stabilisation.**

**Portland Cement** is particularly suitable for:

- Applications where 7 and 28 day strength are fundamental to performance.
- Ready-mixed concrete and mortar applications where high levels of workability are desired.
- Soil stabilisation and adhesives.

### Applications

**Portland Cement** with enhanced properties for ready-mixed concrete, mortar and soil stabilisation.

Concrete, mortars and grouts containing Portland cement must be specified and used correctly for best performance. The cement content must be correct and the water: cement ratio as low as possible consistent with satisfactory placing, thorough compaction and effective curing.

Refer to the following documents:

- BS EN 206-1: Concrete.
- BS 8500: Concrete – Complementary British Standard to BS EN 206-1.
- BS 5628: Part 3 Use of Masonry.

Portland Ash Blend or Slag Blend Cements should be used where increased resistance to sulphates is required.

### Properties

- Grey colour.
- Consistent strength meeting all the conformity criteria in BS EN 197-1.
- 7 and 28 day strength.
- Compatible with admixtures such as air-entraining agents and workability aids, with additions such as fly-ash and ground granulated blast furnace slag and with pigments. Trial mixes are recommended to determine the optimum mix proportions.

### Availability

**Portland Cement** is available throughout the United Kingdom in bulk tankers.

### Conditions Of Use

Concrete, mortars and grouts containing **Portland Cement** must be specified and used correctly for best performance.

The cement content must be correct and the water:cement ratio as low as possible consistent with satisfactory placing, thorough compaction and effective curing.

The final finish quality of this material will depend upon the operative having the required skills and a familiarisation with the materials and its application methods.

Breedon Cement Limited cannot be held responsible where workmanship has not been carried out in accordance with good practice.


**Portland Cement** is manufactured from natural products, and slight shade variations may occur. Portland cement will also have shade variations from differing manufacturing centres.

### Technical Support

Further information and advice on this product and the full range of Breedon cement products can be obtained through contacting your local representative, or by calling our customer services team on **0845 5201 888**.

### 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.



To discuss your specialised mix  
and any further requirements, call:

**0845 5201 888**

**[cement@breedongroup.com](mailto:cement@breedongroup.com)**

**[breedongroup.com](http://breedongroup.com)**

### Typical properties

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

Surface area (m <sup>2</sup> /kg) Portland SSA	330 - 360
Setting time - initial (minutes)	60 to 180
BS EN 196-3 Mortar - compressive strength	2 day (N/mm <sup>2</sup> ) 30 to 40 7 day (N/mm <sup>2</sup> ) 45 to 55 28 day (N/mm <sup>2</sup> ) 54 to 68
Apparent particle density (kg/m <sup>3</sup> )	3080 to 3180
Bulk density (kg/m <sup>3</sup> )	Aerated 1000 to 1300 Settled 1300 to 1450
Colour L value	61.0 - 66.0
Sulfate SO <sub>3</sub> (%)	3.0 to 3.6
Chloride Cl (%)	Less than 0.10
Alkali Eq Na <sub>2</sub> O (%)	0.4 to 1.0
Tricalcium Silicate C <sub>3</sub> S (%)	45.0 to 65.0
Dicalcium Silicate C <sub>2</sub> S (%)	15.0 to 25.0
Tricalcium Aluminate C <sub>3</sub> A (%)	7.0 to 12.0
Tetracalcium Aluminoferrite C <sub>4</sub> AF (%)	6.0 to 10.0



Sales enquiries:

**0845 5201 888**

[cement@breedongroup.com](mailto:cement@breedongroup.com)

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Portland cements are predominantly compounds of calcium silicate and calcium aluminate with a small proportion of gypsum. They are 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.

The information given in this technical datasheet is based on our current knowledge and is intended to provide general notes on our products and their uses. Breedon Cement endeavours to ensure that the information given is accurate but accept no liability for its use or its suitability for a particular application because of the product being used by the third party without our supervision.

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