

# PREMIUM CEMENT

EN 197-1: 2011 CEM I PORTLAND CEMENT CLASSES 52,5N AND 52,5R



**Premium Cement is a high quality general purpose cement which is used in a wide range of applications across the United Kingdom.**

The quality of our Portland cement is guaranteed to meet, in full, the requirements of EN 197-1 : 2011 : 'Cement Part 1: Composition, Specification and Conformity Criteria for Common Cements' and carries the CE mark.

Portland cement is made by fusing together at high temperatures a precisely controlled blend of very finely ground limestone and shale to form cement clinker. A small quantity of gypsum is added to this clinker before grinding to produce the final fine powder – Premium Cement.



## APPLICATIONS

Premium Cement is suitable for a wide range of applications where no special or unusual considerations arise.

Typical applications include use in general readymixed and site-mixed concrete, precast and pre-stressed concrete, masonry, mortars, renders and grouts. It is suitable for use with a wide range of additives and admixtures.



## PRODUCT DATA

Regular information is available on the performance aspects of Premium Cement which are of direct interest to specifiers and users.

The requirements of EN 197-1: 2011 for class 52,5 CEM I Portland cements, are compared hereunder to typical performance data for Premium Cement.

### Setting time

EN 197-1 requires a minimum initial setting time of 45 minutes. Initial set for Premium Cement typically exceeds 90 minutes.

### Strength

Minimum compressive strengths for standard mortar prisms of 20 MPa and 30 MPa at 2 days for EN 197-1 cement classes 52,5N and 52,5R respectively. EN 197-1 additionally requires all class 52,5 cement to have mortar prism strengths of at least 52.5 MPa at 28 days.

Typical mortar prism strengths for Premium Cement are in the range 26-38 MPa at 2 days and 55-65 MPa at 28 days.

Users are particularly interested in strength development and durability in concrete. Strength is significantly affected by mix constituents and proportions, ambient temperature and the efficiency of curing. A durable concrete requires an adequate cement content and a low water/cement ratio. The correct mix ratio of cement:sand and the use of suitable mortar admixtures or lime is necessary to provide good durability in mortars or plaster. Guidance is available in British Standards for concrete and concrete products and, for all applications, through our Southern Cement Customer Support Team.



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## CHEMICAL COMPOSITION

Portland cement clinker consists predominantly of compounds formed from calcium, silica, alumina and iron. Calcium sulfate is present in cement due to the gypsum addition to control setting time and up to 5% of minor additional constituents may be added for CEM I Portland cement in accordance with EN 197-1 (e.g. Limestone).

Specific chemical data (e.g. alkalis and chlorides) are provided regularly on test certificates.



## TEST CERTIFICATES

Routine product test data covering the key physical and chemical parameters is made available on a monthly basis on request



## QUALITY ASSURANCE AND CERTIFICATION

In addition to the company's own guarantee, Premium Cement is CE marked in accordance with the requirements of the EU Construction Products Directive. The CE marks have been awarded by National Standards Authority of Ireland (NSAI) and the Spanish Association for Standards (AENOR).



## STORAGE

Cement should be stored dry, otherwise its quality will deteriorate through premature hydration and carbonation. Moisture from the air can be as harmful as direct moisture. Cement stored in bulk in a well-maintained silo should maintain its quality for some months. Cement is also supplied in moisture-resistant paper bags to give improved storage life.



## HEALTH & SAFETY

Cement is irritating to eyes, respiratory system and skin. Keep out of the reach of children. Avoid contact with the skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing. A chromium VI reducing agent has been added and is effective for 1-2 months (see bag or delivery docket for details); for bulk cement from the date of despatch, and for bagged cement from date of packing, if stored in dry conditions. A detailed Safety Data sheet is available on our website.

## FURTHER INFORMATION

For further information on locations and products please refer to [southerncement.co.uk](http://southerncement.co.uk)



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CEMENT**

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