



Premium Cement

B.S. EN 197-1: 2011 CEM I Portland Cement Class 42,5R

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 all Portland cement produced by the company is guaranteed to meet, in full, the requirements of British Standard BS 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 approved 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 British Standard BS EN 197-1: 2011 for CEM I Portland cement, class 42,5R, are compared hereunder to typical performance data for Premium Cement.

Setting time

BS EN 197-1 requires a minimum initial setting time of 60 minutes. Initial set for Premium Cement typically exceeds 90 minutes.

Strength

Minimum compressive strengths for standard mortar prisms of 20 MPa at 2 days and 42,5 MPa at 28 days are stipulated in BS EN 197-1 for cement class 42,5R, in accordance with particular compliance rules.

Typical mortar prism strengths are in the range 28-32 MPa at 2 days and 55-60 MPa at 28 days for Premium Cement.

Users are particularly interested in early 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. Guidance is available in British Standards for concrete and concrete products and, for all applications, through our Premier Cement Customer Support Team.





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 CEMI Portland cement in accordance with B.S. 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 weekly 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 mark has been awarded by National Standards Authority of Ireland (NSAI).

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 2 months; 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 the website.

Contact Details

Premier Cement Ltd.,
Shed E,
Kings Dock,
Swansea,
SA1 8QT
Tel. +44 1792 645302
Email: info@premiercement.co.uk
Website: www.premiercement.co.uk

Other Products

Premier Cement also supplies White Cement and Premier Lime.

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