MATERIALS DATASHEET

PORTLAND

Portland cement

BS EN 197-1 - CEM I 52,5 N

CEM I Bulk Portland cements are the most widely specified in the UK. The original "general purpose" product, Portland cement is used in various applications, from concrete, mortar and render to the manufacture of pre-cast units such as blocks, bricks, pipes and tiles.

CEMEX Portland is produced by burning a precisely specified mixture of raw materials containing lime, silica, alumina and small quantities of other materials to form a clinker. The clinker, together with calcium sulfate to control setting, is then ground to produce cement of the required fineness. Up to 5% of minor additional constituents (typically, limestone, fly ash or granulated blastfurnace slag) may be incorporated at the grinding stage.

FEATURES/BENEFITS/ APPLICATIONS

- Can be used with admixtures to produce concretes suitable for a wide range of applications
- Consistency in manufacture
- Compatible with fly ash and blast furnace slag
- Colour of UK-manufactured cement is generally compatible across sites

DELIVERY AND STORAGE

Delivered in pressurised bulk powder tankers by road, the standard load size is 28-30 tonnes. Silo identity disks can be provided for individual products by calling Customer Services on 0800 353433.

All CEMEX drivers are fully trained and experienced in the discharging of our vehicles, please do all you can to ensure your site is accessible with no obstructions. If you are in any doubt, we can send an engineer to advise you – just ask.

To avoid premature deterioration of the reducing agent incorporated in the cement for control of soluble chromium (VI), storage should be in accordance with our recommendations given on despatch documents.

HEALTH AND SAFETY

Contact with wet cement, wet concrete or mortar may cause irritation, dermatitis or severe alkali burns. Contact between cement powder and body fluids (eg sweat and eye fluids) may also cause irritation, dermatitis or burns. There is serious risk of damage to the eyes. Wear suitable waterproof protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. After contact with skin, wash immediately with plenty of clean water. Keep out of reach of children. Contains chromium (VI), may cause allergic reaction, the risk of which is increased if the cement is used beyond the declared storage period shown on despatch documents.

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PRODUCT APPLICATIONS

To produce a durable concrete using CEMEX Portland, the cement content of the mix must be maintained at an acceptable level. BS 8500; Concrete – Complementary British Standard to BS EN 206-1, gives guidance for using cements in concrete for various exposure classes, aggressive ground conditions and intended working life.

Once in place, concrete requires moisture to develop its full strength and premature drying out must be avoided. In normal conditions and at temperatures in excess of 10ºC, concrete should be cured under damp conditions for 1 to 3 days (cover with curing membrane, plastic sheeting or wet hessian); at temperatures below 10ºC, this curing time should be doubled. Protection against freezing is required until the concrete reaches a compressive strength of 5 MPa. If temperatures in excess of 30ºC are experienced in the first 24 hrs of curing, then some reduction in 28-day strength can be expected.

Fly ash or ground granulated blastfurnace slag (ggbs) may be added, provided these comply with the appropriate standard and that due allowance is made in the mix design. Both controlled fineness fly ash and ggbs for use in concrete are available from CEMEX (see separate Data Sheets) and are certified to their respective standards by BSI Product Services.

All normal concrete admixtures (eg plasticisers, air-entrainers, retarders) may be used with CEMEX Portland. A range of admixtures complying with BS EN 934 are also available from CEMEX.

DECLARED PERFORMANCE AND CE MARKING

CEMEX cements conforming to the harmonised European standard, BS EN 197-1, are subject to rigorous third party certification procedures by an EU Notified Body, in accordance with assessment and verification of constancy of performance (AVCP) system 1+.

Declarations of Performance, in respect of essential characteristics, are available from our UK website www.cemex.co.uk/cemarks.

The CE marking is affixed to packaging and/or despatch documents as required by the Construction Products Regulation.

CERTIFICATION SCHEME FEATURES

- Independent confirmation that products conform fully to technical specification
- Independent audit testing of products by UKAS accredited laboratories
- Independent evaluation of test data and appraisal of factory production control
- Traceability of cement deliveries to the manufacturing works
- Most rigorous AVCP system (1+) specified in the Construction Products Regulation

PRODUCT DATA

Routine test data including fineness, setting time, soundness, alkali and chloride levels and BS EN 196-1 mortar prism strengths are available in the form of weekly Cement Test Reports. Other test data including chemical analyses are also available on request.

Data on principal products are also available electronically. Contact us for further details and registration.

For further information please contact Customer Services on:

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