



## Material Datasheet

# WHITE

## Portland-limestone cement BS EN 197-1 - CEM II/A-L 52,5 N



Rugby® White is a white Portland-limestone cement with similar setting and hardening properties to standard grey cements. Colour-forming materials (principally oxides of iron) are excluded or minimised in the manufacturing process in order to produce a white cement.

Rugby® White is suitable for production of attractive and durable visual concrete, mortars and renders. White or light coloured finishes may be obtained with selected aggregates or sands and the cement also provides an excellent basis for the use of pigments to produce coloured mortars and concretes.

### Features/benefits/applications

- Produces light - coloured concrete/mortar
- Ideal for architectural and decorative finishes
- Coloured aggregates or BS 1014 pigments can be used

### Delivery and storage

Delivered by road in a curtain-sided vehicle, the standard load size is 28 - 30 tonnes. All CEMEX drivers are fully trained and experienced in the safe delivery and unloading of vehicles, but please do all you can to ensure that the site is accessible with no obstructions.

Rugby® White is available in paper sacks delivered as shrink-hooded, 1.5 tonne modules on non-chargeable pallets, or in smaller quantities as required. Rugby® White should be stored off the ground, in clean, dry conditions and covered with a plastic sheet. Bags should be used in strict rotation to minimise risk of air setting due to excessive storage times.

### 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 (e.g. 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.



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## Product applications

### Concrete

Rugby® White should be used in the same proportions as Rugby® High Strength for general concreting operations. Sharp (concreting) sand should be used, together with 20mm maximum size coarse aggregate and the minimum amount of water necessary for placement and compaction. Excess mixing water reduces both strength and durability of concrete. Use of separate sand and coarse aggregate is preferable to all-in aggregate (ballast). A white or light coloured finish will depend upon appropriate selection of aggregates (ballast).

The following tables give nominal mix proportions by volume for common applications:

#### General purpose mix application:

For most uses except outdoor paving.

|                      | Proportions by volume | Amount per M <sup>3</sup> (approx) |
|----------------------|-----------------------|------------------------------------|
| Rugby® White         | 1                     | 310 kg                             |
| Sand                 | 2                     | 655 kg                             |
| 20mm aggregate       | 3                     | 1130 kg                            |
| (all - in aggregate) | (4)                   | (1785 kg)                          |

#### Paving mix application:

For all exposed in-situ paving – e.g. pool surrounds and driveways.

|                      | Proportions by volume | Amount per M <sup>3</sup> (approx) |
|----------------------|-----------------------|------------------------------------|
| Rugby® White         | 1                     | 385 kg                             |
| Sand                 | 1½                    | 575 kg                             |
| 20mm aggregate       | 2½                    | 1150 kg                            |
| (all - in aggregate) | (3½)                  | (1725 kg)                          |

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 10°C, concrete should be cured under damp conditions for 1 to 3 days (cover with curing membrane, plastic sheeting or wet hessian); at temperatures below 10°C, this curing time should be doubled. Curing is particularly important with CEM II cements. Protection of fresh concrete against freezing is essential and placement under such conditions should be avoided if possible.

### Mortar

Rugby® White is fully compatible with hydrated lime and the plasticising admixtures used to produce high workability mortars for use in brick/block laying and rendering. The colour of finished mortar will be dependent on the sand used. The table below gives volumetric mix proportions for general mortar applications:

|                                     | Rugby® White : Sand<br>(with plasticier) | Rugby® White :<br>Lime : Sand | Equivalent BS EN 998-2<br>Mortar class |
|-------------------------------------|--|-------------------------------|--|
| General usage<br>(low-rise housing) | 1 : 5 - 6                                | 1 : 1 : 5 - 6                 | M 2,5                                  |
| Strong<br>(free standing walls)     | 1 : 3 - 4                                | 1 : ½ : 4 - 4½                | M 5                                    |

### Rendering

In rendering applications, it is important when applying two-coat renders (normal practice) that the second coat is either thinner or weaker than the scratch coat to avoid problems with shrinkage and de-lamination. A suitable sand for rendering should be chosen. The table below gives volumetric mix proportions for general rendering applications.

|  | Rugby® White : Sand<br>(with plasticier) | Rugby® White : Lime : Sand |
|--|--|----------------------------|
| First coat ( <b>strong backgrounds</b> )   | 1 : 3 - 4                                | 1 : ½ : 4 - 4½             |
| First coat ( <b>moderate backgrounds</b> )<br>or<br>Second coat ( <b>moderate and strong backgrounds</b> ) | 1 : 5 - 6                                | 1 : 1 : 5 - 6              |

Once placed, mortar requires measures to prevent premature loss of moisture and the advice given above on curing of concrete is again applicable. When rendering over backgrounds with high suction (e.g. autoclaved aerated blocks), or in drying weather conditions, attention to curing is particularly important.

### Product certification

CEMEX products are subject to rigorous third party certification procedures detailed in BS EN 197-2 (Cement – Part 2: Conformity evaluation), which lead to issue of EC certificates of conformity by an EU Notified Body. Products that carry EC Certification bear the CE marking to indicate conformity to all requirements of their harmonised technical specification and a presumption of conformity to the essential requirements of the Construction Products Directive.