



### Environmental and sustainability advantages

CEMEX is committed to continuous improvement in environmental and sustainability performance, particularly through utilising recycled content, minimising landfill waste and improving our energy efficiency.

CEM II cements are factory produced Portland composite cements. Packed CEM II cements from CEMEX are of the Portland-fly ash and Limestone type, making not only a more sustainable cement but improving its performance characteristics.

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## Product application chart

	 Rugby <sup>+</sup> CEMENT	 Rugby <sup>+</sup> PREMIUM CEMENT	 Rugby <sup>+</sup> SULFATE CEMENT	 Rugby RAPID CEMENT	 Rugby FAST SET CEMENT	 Rugby WHITE CEMENT	 Rugby LIME HYDRATED LIME
General purpose concrete	■	■					
Below ground concrete/DPC	■	■	■	■			
Cold weather concreting			■	■		■	
Precasting				■		■	
Mortar	■	■	■	■		■	●
Screeding	■	■	■	■			
Render	■	■	■	■		■	●
High early strength				■			
Enhanced Sulfate resistance			■				
Enhanced freeze/thaw durability		■					
Decorative light/finishes						■	
Concrete/mortar repair work	■	■			■		
Fixing fence posts					■		
High strength				■		■	

**Key** ■ Recommended for best performance ■ Suitable for this application ● Mix with Rugby cements (not required with Masonry)

Also available



## Product Guide

PACKED CEMENT SOLUTIONS





## Rugby+ CEMENT

- For general use in any building application, including concrete, mortar, render, screed or grout
- Ideal for use in smaller jobs and repair work
- Compatible with lime and plasticising admixtures
- Chromium (VI) compliant
  - Intended to reduce the risk of allergic contact dermatitis



## Rugby WHITE

- For architectural and decorative applications
- Ideal for very light coloured concrete and mortar
- Enhances colour when used with pigments
- Reduces pigment costs
- More vivid colours can be achieved compared to using grey cements
- Rapid strength gain, ideal for use where early stripping times are required
- Chromium (VI) compliant
  - Intended to reduce the risk of allergic contact dermatitis



## Rugby+ PREMIUM CEMENT

- New lighter colour, ideal for use in all applications where colour is important
- For use in concrete, mortar, render and screed
- Reduced admixture requirements in mortar
- Improved workability, cohesion, finishing and resistance of hardened mortar or concrete to freeze-thaw attack
- Consistent, convenient and cost effective
- Chromium (VI) compliant
  - Intended to reduce the risk of allergic contact dermatitis



## Rugby HYDRATED LIME

- Improves workability and water retention in mortar
- Ideal for use in traditional cement/lime/sand mortars
- Provides better bond and reduces risk of cracking
- Assists in soil stabilisation, water and sewerage treatment
- Suitable as an acidity regulator for land in agricultural use



## Rugby RAPID

- Suitable for applications where high strength is required
- Conforms to class 52,5R insuring high early strength gain
- Helps counteract the effects of cold weather
  - Due to early age reactivity and increased heat development
- Ideal for general, pre-cast and pre-stressed concrete applications
- Ideal for use where early stripping times are required
- NOT an early setting cement
- Chromium (VI) compliant
  - Intended to reduce the risk of allergic contact dermatitis



## Rugby+ SULFATE

- Ideal for use in concrete and mortar applications where sulfates are present
- Suitable for mortar and concrete below damp proof course
- Increased resistance to chemicals present in soils or ground water
- Refer to BRE Special Digest 1 (for CEM II/B-V + SR), a guide for concrete in aggressive ground conditions
- Chromium (VI) compliant
  - Intended to reduce the risk of allergic contact dermatitis



## Rugby FAST SET

- Sets hard within 1 hour
- For use in applications where time is of the essence
- Ideal for concrete, mortar, render and floor screed repairs
- Suitable for concrete drives, steps, paths and kerbs
- Also suitable for fixing posts, railings and copings
- Chromium (VI) compliant
  - Intended to reduce the risk of allergic contact dermatitis

# Mixing Guides

## Concrete

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). The following table gives nominal mix proportions by volume for general applications.

### General purpose mix application:

For most uses except foundation work and outdoor paving.

	Proportions by volume	Amount per m <sup>3</sup> (approx)
Cement	1	310kg
Sand	2	655kg
20mm aggregate	3	1130kg
(all-in sand and gravel or ballast)	(4)	(1785kg)

### 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)
Cement	1	385kg
Sand	1 1/2	575kg
20mm aggregate	2 1/2	1150kg
(all-in sand and gravel or ballast)	(3 1/2)	(1725kg)

### Foundation mix application:

For footings, foundations and bases for precast paving.

	Proportions by volume	Amount per m <sup>3</sup> (approx)
Cement	1	265kg
Sand	2 1/2	690kg
20mm aggregate	3 1/2	1100kg
(all-in sand and gravel or ballast)	(5)	(1800kg)

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 as early strengths may be slightly lower than for CEM I products. Protection of fresh concrete against freezing is essential and placement under such conditions should be avoided if possible.

## Concrete using Rugby Rapid Cement and Rugby+ Sufate Cement

For more information on mixing guides using our specialist cements, please visit [www.cemex.co.uk/cement](http://www.cemex.co.uk/cement) where you will be able to download specific product datasheets with mixing guidelines. Alternatively please call our sales Customer Service Centre on **0808 145 1900**.

## Mortar

Rugby+ range of cements are fully compatible with hydrated lime and the plasticising admixtures used to produce high workability mortars for use in brick/block laying and rendering. However, the production of mortar on site with Rugby+ Premium will require less admixture due to its formulation.

	Cement:Sand (with plasticiser)	Cement:Lime:Sand	Equivalent BS EN 998-2 Mortar Class
General usage (low-rise housing)	1:5	1:1:5	M 2,5
Strong (free standing walls)	1:3	1:1/2:4	M 5

## Mortar using Rugby Fast Set Cement and Rugby White Cement

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## 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. Mix proportions for rendering over strong and moderately strong backgrounds are given below.

	Cement:Sand (with plasticiser)	Cement:Lime:Sand
First coat (strong backgrounds)	1:3	1:1/2:4
First coat (moderate backgrounds) or Second coat (moderate and strong backgrounds)	1:5	1:1:5

## Rendering using Rugby White Cement

For more information on mixing guides for render using Rugby White cement, please visit [www.cemex.co.uk/cement](http://www.cemex.co.uk/cement) where you will be able to download a specific product datasheet with mixing guidelines. Alternatively please call our sales Customer Service Centre on **0808 145 1900**.