



Material Datasheet

HYDRATED LIME BS EN 459-1 CL 90-S



Rugby® Hydrated Lime is a non-hydraulic hydrated lime which complies with the high calcium classification of BS EN 459-1 CL 90-S. It is used extensively in agricultural/horticultural applications, and building construction.

Rugby® Hydrated Lime is manufactured by calcining a high calcium limestone in carefully controlled conditions. The quicklime produced is then crushed and hydrated to produce a fine powder with a loose bulk density of 600 kg/m³ (typical neutralising value 74% CaO).

Features/benefits/applications

- Improves workability and water retention in mortars and renders
- Suitable for use in agriculture/horticulture as an acidity regulator for land
- To assist in soil stabilisation, water treatment and sewage treatment
- Can be used as a lime wash for buildings

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 our vehicles, please do all you can to ensure your site is accessible with no obstructions. Rugby® Hydrated Lime is available in paper sacks delivered as shrink-hooded, 1.0 tonne modules on non-chargeable pallets. Rugby® Hydrated Lime should be stored off the ground, under clean and dry conditions and covered with a thin plastic sheet. Bags should be used in strict rotation.

Health and safety

Rugby® Hydrated Lime is an alkaline substance which can cause burns and should therefore be used and handled with care. Safety instructions can be found in our Health and Safety Data Sheets (available on request) and also on the back of each bag. These instructions should be brought to the attention of anyone who handles or uses our products.



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Product applications

Mortar

Rugby® Hydrated Lime may be used together with Rugby® cements to produce traditional cement : lime : sand mixes for mortars and renders. Hydrated lime being non-hydraulic is not suitable for use in mortars without cement being present. The principal benefit derived from hydrated lime in mortars is its effect of improving the workability and water retention. Whilst the hydrated lime does improve these properties the maximum benefit is derived from the use of lime putty. To produce lime putty, hydrated lime is gradually added to water, in a clean container, with constant stirring to form a paste. The paste is then allowed to condition by standing for at least 24 hours.

Proportions in mortar mixes

Mortar designation	Cement	Hydrated lime	Sand	Equivalent BS EN 998-2 mortar class
I	1	0-¼	3	M 10
II	1	½	4-4½	M 5
III	1	1	5-6	M 2,5
IV	1	2	8-9	M 1

- All the above proportions are by volume.
- The sand where possible should comply with appropriate British Standards.
- The lime can either be the dry hydrate or in the form of putty. The volumes used are the same in each case.
- Rugby cements are fully compatible with Rugby Hydrated Lime.

Mortar applications

Type of construction	Mortar designation
Copings	I
Retaining Walls	I or II
Free Standing Walls	I, II or III
Work Below DPC	I, II or III
Low Rise Housing (External)	III
Low Rise (Internal)	III or IV

N.B. These recommendations are given as a guide. The brick or block manufacturers advice should always be adhered to.

External rendering

Rendering mixes are similar to those used for bricklaying. The following is a guide to the type of mixes used.

Type of finish	Background	Mix designation	
		Severe exposure	Moderate exposure
Wood float scraped or textured. First and subsequent undercoats	Dense Strong	II	II
	Moderately Strong, Porous	III	III
	Moderately Weak, Porous	III	IV
	No Fines concrete	II	III
	Metal Lathing	I/II	I/II
Final coat	Dense Strong		
	Moderately Strong, Porous	II	IV
	Moderately Weak, Porous		
	No Fines concrete		
Roughcast and drydash all coats	Metal Lathing	II	III
	Not recommended over weak porous backgrounds	II	II

- N.B.**
1. The sand where possible should comply with appropriate British Standards.
 2. The undercoat or first coat must be weaker in strength than the background or substrate.
 3. The finishing coat must be weaker than the undercoat, e.g. an undercoat of 1:1:5 with a finishing coat of 1:1:6.

Internal cement-based plastering

Lime gives excellent workability and water retentivity which assists in obtaining first class alignment and finish. Cement lime sand plasters have a greater resistance to deterioration in damp conditions than plasters containing gypsum. The mixes recommended are as follows:

Undercoats

Designation IV mortar. For most normal plasterwork. Designation III mortar. Where a strong finish is to be applied.

Finishing coats

Finishing coats must never be stronger than the backing coats to which they are applied. For damp conditions, the material should not be overtrowelled if shrinkage cracking is to be avoided. A designation III or IV mix is normally used in these circumstances.

For further information please contact
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