

Mortar Industry Association

Groundworking

Flexibility for groundworker contracts

Quality not quantity is often the order of the day for groundworkers especially when operating in poor or aggressive soil conditions on site.



Realising this, producer-members of the Mortar Industry Association have built flexibility into how they can deliver product to site. Now wet and dry delivery options are available offering great benefits in terms of product quality, consistency and reduced site wastage and pilferage.

It certainly means the end of the need for a site cement mixer. Product quality is assured because mortars are made under tightly-controlled factory conditions. They have guaranteed mix proportions and overcome any potential problems relating to site mixing.

Wet mortars are delivered to site either in tubs or by truckmixers, offloading on site into tubs. This can be especially useful to groundworkers when water and electricity services are not available. No further mixing of the mortar is required and it incorporates a retarding agent that makes it fully useable for a specific period – usually some 36 hours. Tubs can easily be moved about the site by forklift trucks to be close to the work in hand.

Dry mortars can be delivered to site in 25 kg plastic bags or for storage in silos supplied by the mortar producer. Silos range in size from one to 35 tonnes capacity and are delivered to site complete with integral mixers, requiring only power and water supplies to be connected.

Factory-produced mortars offer groundworkers flexibility and clear benefits:

- accurate cement content
- consistent strength and colour
- reduced mixing and labour costs
- reduced wastage and pilferage
- guaranteed meeting of specification
- technical advice and test data upon request.

Getting the best out of factory-produced mortars

The Mortar Industry Association has produced a range of data sheets that can be downloaded from the resources section of its website – www.mortar.org.uk.

Subjects covered include technical specifications, types of mortar available, external rendering and internal plastering, working in low temperatures plus a very broad guide to the terminology used relating to mortars and brick and block laying in general.

Where you can order

Factory-produced mortars are available from MIA producer members. The panel below gives contact telephone numbers and website details for these producers who offer mainland UK coverage unless otherwise stated.

Suppliers

Breedon Aggregates Ltd

01332 694000 (England)

0845 270 7374 (Scotland)

www.breedonaggregates.com**CEMEX UK Materials Ltd 01932 568833**www.cemex.co.uk**CPI Mortars Ltd 0845 850 9090**www.euromix.com**Hanson Premix 0845 845 6699**www.hanson.biz**John Carr (Liverpool) Ltd 0151 2070067**

(Liverpool)

RTU 02890 851441www.rtu.co.uk (Belfast)**Remix Dry Mortar Ltd 01329 231200**www.remixdrymortar.co.uk**Roadstone Dublin Ltd 00 35 31 4041200**www.roadstone.ie (Dublin)**Smiths Concrete Ltd 01295 278177**www.smithsconcrete.co.uk (Oxfordshire)**Tarmac Limited 08701 116 116**www.tarmac.co.uk

Estimating quantities of bricks and mortar



Quantities of bricks and mortar in the following tables have been arrived at assuming that standard bricks with a work size of 215 × 102.5 × 65 mm are used and the mortar joints are solidly filled and nominally 10 mm wide.

For the mortar, five figures are given for each wall thickness, depending on the form of the bricks being used and how they are laid, ie:

- **solid bricks**
- **perforated wire-cut bricks**
it is difficult to estimate how much mortar enters the perforations as this will vary with the pattern and size of the holes. A 5% increase over the figure for solid bricks is assumed
- **bricks with a shallow frog**
in which the frog is about 5% of the gross volume of the brick
- **bricks with a deep frog, laid frog up**
in which the frog is up to 20% of the gross volume of the brick eg, a pressed Fletton brick
- **bricks with a deep frog, laid frog down.**

Handling and wastage

The quantities of bricks and mortar given in the tables are based on calculation. In practice, allowance must be made for handling and wastage.

Information for this section kindly supplied by the Brick Development Association.

Quantity of bricks and mortar per square metre of wall surface

Wall thickness	Number of bricks	Mortar (cubic metre)				
		Solid	Perforated wire cut	Shallow frog	Deep frog (frog up)	Deep frog (frog down)
102.5 mm	59.26	0.018	0.019	0.022	0.030	0.023
215 mm	118.52	0.045	0.047	0.054	0.068	0.055
327.5 mm	177.78	0.078	0.082	0.086	0.107	0.088
440 mm	237.04	0.101	0.106	0.118	0.146	0.120

Quantity of mortar per 1000 bricks

Wall thickness	Mortar (cubic metre)				
	Solid	Perforated wire cut	Shallow frog	Deep frog (frog up)	Deep frog (frog down)
102.5 mm	0.30	0.32	0.37	0.50	0.39
215 mm	0.38	0.40	0.46	0.58	0.47
327.5 mm	0.41	0.43	0.48	0.60	0.49
440 mm	0.42	0.44	0.50	0.62	0.51

Health and safety

Suitable protective clothing and should be worn when handling wet mortar as contact with the skin can cause contact dermatitis and burns.

A full guide to health and safety matters associated with factory-produced mortars – Health and safety guidelines – *factory produced mortars for masonry and render* – is available through the Mortar Industry Association website.

The datasheet explains what goes into the making of mortar such as fine aggregate, cement and water. In some circumstances – and depending on mix design – other materials may be incorporated too. These can include hydrated lime, pulverised fly ash, ground granulated blast-furnace slag and admixtures such as plasticisers, water repellents and polymers. All add up to making mortar abrasive and alkaline.

This means contact with the skin and eyes may cause burns and ulcerations. The datasheet gives general first aid measures in the event of emergencies but stresses that medical advice should always be sought.



The datasheet lists the personal protection equipment that should be used when dealing with mortar and all information is in accordance with government guidelines.