

TECHNICAL INFORMATION

Authority

CEMEX dry silo mortar complies with the requirements of:

BS EN 998-2:2003 'Specification for mortar for masonry, Masonry Mortar' which replaced the following mortar and test method standards from the 31st Jan 2005:

BS 4551-1:1998, 'Methods of testing mortars, screeds and plasters, Physical Testing'

BS 4721:1981, 'Ready-mixed Building Mortars'

BS 5838-2:1980, 'Specification for dry packaged cementitious mixes, Packaged mortar'

Advantages

CEMEX dry silo mortar systems have a number of advantages over traditional site mixed mortar.

- **Guaranteed strength**
- **Guaranteed cement content**
- **Controlled air content**
- **Consistent colour**
- **Increased site productivity**

Adjustable consistency

Regardless of the type of masonry unit, the mortar workability can be adjusted on site, giving the site personnel complete control.

Project management

The storage of the material on site will be unaffected by weather and the rate of use is controlled at site level.

Manufacture

The CEMEX dry silo mortar system is manufactured under a 3rd party accredited factory production control system, using the latest technology to provide you with a convenient mortar batching facility, with the following benefits:

- **Guaranteed colour and consistency**
- **Clean and efficient production with reduced wastage and increased productivity**
- **Reduces manual handling and the risk of injury in production, for improved health and safety**

Colour

Where a coloured mortar is specified the control and accuracy of the pigment addition and mixing process ensures consistent dispersion throughout the mix. CEMEX dry silo mortar is available in a wide range of colours to meet specific design requirements.

Performance characteristics

CEMEX dry silo mortar can be supplied to a range of strength classifications to meet customer requirements.

BS EN 998-2:2003 describes the mortar class, where the compressive strength is designated by an 'M' followed by the compressive strength class in N/mm².

Strength

The table below relates the mix designations, given in the withdrawn BS 4721, to the European description equivalent.

Old mortar designation BS 4721	Nominal proportions by volume		Compressive strength 28 days, not less than N/mm ² Table N. A.1 (BS EN998-2)	Equivalent new description BS EN998-2
	Cement:Sand	Cement:Lime:Sand		
I	1:3	1:1:1-3	12.0	M12
II	1:3-4	1:1:4-5	6.0	M6
III	1:5-6	1:1:5-6	4.0	M4
IV	1:7-8	1:2:8-9	2.0	M2

Quality Control

CEMEX dry silo mortar is produced in accordance with the new standard requirements for designed mortars, and our mortar conforms to attestation level 2+. This means that not only will initial type testing and a factory production control system be operated, but a higher level of production testing will be undertaken and the production control system will be audited by an independent third party to ensure compliance. This extra level of attestation will mean that CEMEX dry silo mortar materials are further guaranteed to conform to the new standard.

The initial type testing will evaluate the material and enable the properties to be declared or to be calculated. The factory production control system will ensure the material is produced to a consistent quality level.

As a result of the measures taken for control of testing and production, our product can be marked with the letters CE, the conformity logo for European compliance. The CE marking information for each product can be supplied on request.

Workability

CEMEX dry silo mortar when blended with water offers excellent workability without an excessive air content, the inclusion of which can weaken the bond and flexural strength.

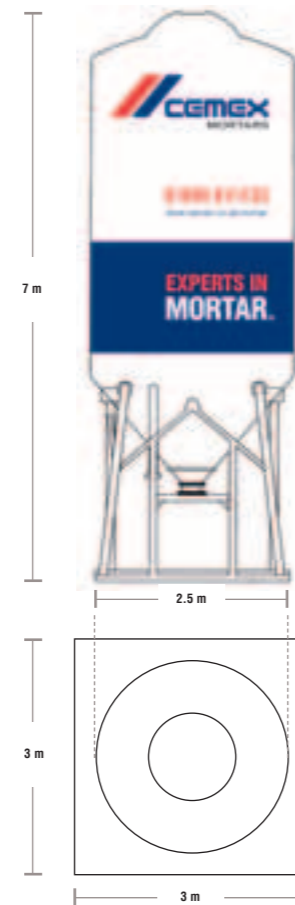
Durability

CEMEX dry silo mortar is also extremely durable due to the controlled method of manufacture and the type and quality of the constituent materials used. The entrainment of controlled amounts of air makes the mortar less susceptible to frost attack. The admixture used is chloride-free and therefore not aggressive towards embedded metallic objects.

Factory produced mortars exhibit superior resistance to rain penetration and therefore make a significant contribution to the durability of masonry.

Applications

CEMEX dry silo mortars are designed for use with all types of masonry units above and below damp-proof course.



Uniclass L6412	EPIC F321
CI/SIB	
Yq4	

EXPERTS IN MORTAR

CEMEX Mortars are available in ready-to-use, lime:sand or dry silo options providing the perfect solution for every situation. Our experts can advise on conformity to standards as well as strengths, colour and working with different brick and block options. At our centrally based research and development centre, the team can support you further with special mix designs, durability and colour specification. All CEMEX mortars conform to British and European standards and are factory produced for consistency and reliability.

ABOUT CEMEX

CEMEX is a growing global building company pursuing innovative industry advancements whilst promoting a sustainable future. Annual sales in over 50 countries exceed US\$ 15 billion. The company is one of the world's leading suppliers of ready-mixed concrete, one of the largest producers of aggregates, and among the world's top traders of cement and clinker. CEMEX employs over 50,000 people worldwide.

In the UK, CEMEX is a leading provider of readymix concrete, aggregates, screed, cement and asphalt. CEMEX UK also has a significant share of the roof tile, concrete block paver and concrete block markets, and is the leading supplier of concrete sleepers to the rail industry.

For more information contact our Mortar Helpline

Tel: 0800 667 827
E-mail: gb-enquiries@cemex.com



Dry Silo Orders

Tel: 01926 811133

Or visit our website at

www.cemex.co.uk/mortar

To find your nearest plant visit

www.cemexlocations.co.uk

To download our latest literature visit

www.cemexpliterature.co.uk

For more information on CEMEX's RIBA CPDs please contact our Mortar Helpline

Tel: 0800 667 827
E-mail: gb-enquiries@cemex.com

The information contained in this publication was accurate at the time of production, however CEMEX reserves the right to introduce modifications or changes to detail at any time, as part of a policy of continuous improvement.

This paper is produced from pulp sourced from properly managed sustainable forests, is elemental chlorine free, uses up to 20% best white waste and is totally biodegradable.

EXPERTS IN MORTAR™

DRY SILO DATASHEET

DRY SILO MORTAR, FOR MAXIMUM PRODUCTIVITY

Quality

Consistency

Reliability

Expertise

Support

Professionalism

Dedication

Passion

Relationships

Delivery

Sustainability

Heritage

Manufactured under a 3rd party accredited factory production control system, the CEMEX dry silo mortar system uses the latest technology to provide you with a convenient mortar batching facility, with guaranteed colour and consistency. The factory produced dry silo mortars offer clean, efficient production with reduced wastage and increased productivity on site. The system also reduces manual handling and the risk of injury in production, for improved health and safety.

CEMEX dry silo mortar is a factory produced dry mortar system that offers many advantages over traditional site mixed mortar:

- **Consistent mortar quality**
- **Clean efficient production**
- **Reduced wastage**
- **Improved labour efficiency**
- **Reduced manual handling**
- **Full range of mixes and colours**
- **Instant availability**

Consistency and quality

CEMEX dry silo mortar is made up of precisely weighed materials to produce the best quality mortar. Prepared in purpose built production units, the mortar has a guaranteed strength content and controlled air content. The system also accurately monitors the addition and mixing of pigments, for consistent colour throughout the mix. Masonry mortars are manufactured to the requirements of BS EN 998-2 and are registered under the CE marking scheme.

Range of mixes

Mixes can be supplied in a full range of strength classes and colours to meet precise requirements. Since all products comply with relevant British and European standards, with CEMEX dry silo mortar you get total quality from the outset.

Excellent workability

CEMEX dry silo mortar demonstrates excellent strength and durability. Easily workable, our mortars are designed for use in brick and block laying applications of all types, both above and below the damp proof course, depending on design.

Service and support

- **A dedicated team of silo specialists will coordinate your service and stock needs**
- **Free delivery and collection of the mortar silos**
- **A complimentary site assessment, advising you of the requirements for the location of the silo**
- **Complimentary staff training on site**
- **Same day breakdown support service, operating 6 days per week. Dedicated trained silo advisers that will initially talk you through any operating difficulties over the telephone**
- **If we cannot resolve the problem over the telephone, we will have a local service engineer sent to your site within four hours after the initial engineer's response during normal working hours Monday to Saturday**

Silo Specification

Each silo is capable of holding approximately 33 tonnes of material and will have fitted as standard:

- **2 methods of venting displaced air**
- **Low level material probe and warning light (set at approx. 10 tonnes)**
- **Material vibrator**
- **Single phase control panel which will invert the electricity supply to a powerful 3-phase mixing motor**
- **Mixing screw with automix and auto-clean facilities**
- **5 metre reinforced power cable**
- **Integral water pump**

Silo/site requirements

The silos are positioned on site by specially designed delivery vehicles. The silo is ready to operate once connected to mains water and electrical supplies. There are a few basic site requirements but most sites should be able to accommodate the silo and top up vehicles.

The silos require a level concrete base, which must be capable of withstanding a gross weight of 40 tonnes. The base needs to be a minimum of 3 metres x 3 metres and 150mm thick, but a larger pad would make on site mortar production easier.

Delivery

When a delivery is expected, make sure that clear unobstructed access is available at all times.

Hard or compacted road access suitable for 44 tonne articulated vehicles is required to ensure that delivery vehicles can access the silo.

The siting of the silo and the 'top up' delivery point should be located as close together as possible, this will minimise the delivery time and maximise the mixer output. When the 'top up' delivery has commenced the mixer cannot be used.

Neither deliveries of silos nor 'top up' material will be made if ground conditions are deemed to be unsuitable.

The judgement in this matter will be made by the driver and their decision is final.

Services

Electrical

The supply of electricity to the silo must be 230 volt single phase provided from a 32A motor rated MCB (40A MCB if not motor rated) backed up by a 30mA RCD dedicated to the exclusive use of the silo. The supply shall be provided to a point less than 5 metres from the silo and fitted with a 32A industrial socket output located within a weatherproof junction box.

Silos can be run off generators if required, whilst services are being connected.

Water

The integral water pump will provide the necessary pressure for the mixing unit and will be fitted with a non-return valve. Should an additional break in the water supply line be required or if the rate of water feed is insufficient, both problems can be overcome by the addition of a



mains fed covered water tank complete with ball-cock. This should be situated not less than 2 metres off the ground level and not greater than 5 metres from the silo.

The inlet feed to the mixer should not be less than 19mm internal bore and fitted with a gate valve. The water feed should be terminated at the base of the silo. CEMEX will, during the training session, connect from the valve to the silo.

General

Site assessment

CEMEX dry silo mortar strongly recommend that a site assessment is carried out prior to the commencement of the contract. The aim of the assessment is to identify potential problems that may result in delays in the programme and to offer advice on the most suitable location for the silo and CEMEX will carry out this assessment free of charge.

Training

CEMEX dry silo mortar provide a free site training service for appointed individuals on the safe system of use for the silo. The aim is to optimise the use of the silo and minimise any disruption through downtime.

Only authorised personnel shall use the silo and the site will be issued with certificates of competence for those trained individuals.

It is the site manager's responsibility to notify CEMEX dry silo mortar of any additional training requirements.

How to order

When initially ordering the silo and first delivery of mortar please allow three working days notice.

The silos are fitted with a low level probe which will activate a warning light when material falls below a point at which there will be approximately 10 tonnes of material remaining in the silo, equivalent to 7m³ of mixed mortar. If the size of the site is sufficient to warrant only one silo, material should be ordered at this time.

This warning system is only a guide and physical measures should be employed to assess the actual material level within the silo.

However, if two or more silos of the same material are being used on site, the point of order should be when one of the silos runs empty.

The CEMEX dry silo mortar silos can be re-located to another position on site, but this process must only be carried out by CEMEX dry silo mortar authorised vehicles and will be charged at a cost.

Office opening hours – Tel: 01926 811133

07.45 – 17.00 Monday – Friday

08.00 – 11.00 Saturday

Normal delivery hours

08.00 – 17.00 Monday – Friday

08.00 – 12.00 Saturday

Out of hours deliveries may be possible on request.