



The Chemical Company

EMACO[®] R301

High strength, shrinkage compensated cementitious mortar

Description

EMACO R301 is a ready to use product in powder form, which requires only the on-site addition of water to produce a non-shrink mortar of predictable performance.

Applications

EMACO R301 is formulated for use in applications typically found in new construction and may be used with confidence for bedding, repairing, and void filling operations such as:

- Concrete repairs.
- Void filling between old and new concrete.
- Floor patching.
- Caulking of concrete pipes.
- Filling tie-bar holes.
- Re profiling of fair faced concrete

Advantages

- Shrinkage compensated
- Adjustable consistency
- Proven and predictable performance
- Trowellable
- High bond strength to steel and concrete
- Early strength development
- Good fatigue and impact resistance
- Low permeability

Packaging

EMACO R301 is supplied in 25kg bags.

Application procedure

Surface preparation:

All surfaces in contact with the material must be sound, dense and clean. All laitance and any unsound material should be removed - an evenly

scabbled, slightly textured surface is required, with all dust and dirt removed. (Note: heavy scabbling, creating deep troughs or high peaks is unsuitable). Surfaces must be pre-wetted to thoroughly dampen the concrete, but any free surface water must be removed before EMACO R301 is placed.

Feather edging is not recommended. Minimum acceptable depth is 10mm, maximum 40mm. Depths greater than 40mm should consider using structural repair mortar EMACO S88C T.

Mixing:

First dry mix contents of bag, then thoroughly mix with the specified amount of water.

Plastic consistency:

Add 3.7-3.9 litres of water to one 25kg bag and mix thoroughly.

Notes:

1. To achieve the properties described, water additions should be accurate to ± 0.1 litre.
2. Water should be slowly added over a 1½ minute period and then mixing continued for a further 2 minutes.
3. It is important that a forced action mixer is used to ensure complete dispersion of the water and thorough mixing thereafter.

Placing:

All of the mix should be placed within 45 minutes of water addition. No water should be added for retempering.

Placing must not take place below 5°C. Below 8°C it is advisable to tent before placing, to warm the

EMACO[®] R301

substrate to 8°C minimum, and subsequently to maintain the placed mortar at 8°C minimum.

Curing:

Curing of the exposed surfaces of EMACO R301 must commence immediately. Following placement the exposed surfaces must be continuously cured at moderate temperatures for seven days after finishing operations. This will prevent early drying shrinkage and help to develop strength, durability and other desired properties. Any deficiencies in the method of curing may also reduce the amount of initial expansion which is needed to offset later drying shrinkage. The use of MASTERKURE curing compounds is strongly recommended.

Typical properties

Properties listed are only for guidance and are not a guarantee of performance

When mixed with 3.9 litres of water a 25kg bag will have the following properties:			
Compressive Strength (BS 6319 Part 2)	24 hrs	29.0	
	3 days	34.5	
	7 days	50.5	
	28 days	55.0	
Tensile Strength N/mm ² (BS 6319 Part 7)	24 hrs	3.0	
	3 days	3.2	
	7 days	3.8	
	28 days	4.0	
Flexural Strength N/mm ² (BS 6319 Part 4)	24 hrs	4.5	
	3 days	8.0	
	7 days	9.0	
	28 days	10.0	
Initial Surface Absorption (ISAT BS 1881 Part 5)	10 mins	0.02	
	30 mins	0.01	
	60 mins	<0.01	
	120 mins	-	

Storage

Store out of direct sunlight, clear of the ground on pallets protected from rainfall. Avoid excessive compaction. Storage life is approximately 12 months when stored as above in original sealed bags.

Precautions

UNDER NO CIRCUMSTANCES SHOULD EMACO R301 BE RETEMPERED BY THE LATER ADDITION OF WATER.

Yield / consumption

12.9 - 13.4 ltr / 25kg bag dependent on water addition rate.

78 x 25kg bags / m³.

Warning

As with other products containing Portland cement, the cementitious material in EMACO R301 mortar may cause irritation. Avoid contact with eyes and prolonged exposure. In case of contact with the eyes, immediately flush with plenty of water for at least 15 minutes. Call a physician. In case of contact with skin, wash skin thoroughly.

Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

10/2002 BASF_CC-UAE revised 03/2003

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As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.

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