BASF

The Chemical Company

EMACO® T288

Pourable, rapid-setting repair mortar

DESCRIPTION

EMACO T288 is a ready to use one component cementitious powder which on mixing with the specified quantity of water provides a rapid-setting pourable repair mortar with high early strength characteristics.

EMACO T288 contains specially selected graded aggregates to enable placing in thick sections.

RECOMMENDED FOR

EMACO T288 is recommended for repair situations requiring a rapid-setting pourable mortar between 35 mm and 150 mm thickness, although greater thicknesses may be achieved depending on the design of the particular repair and site conditions.
Typical applications are:

- Emergency reinstatement of localised patches in roadways, airport aprons, concrete pavement, car parks and other situations where interruption to traffic must be minimized.
- Maintenance of civil structures, Repair concrete floor, Full depth slab repairs, Horizontal patching
- Reinstatement of honeycombed or defective structural concrete.

Greater thicknesses can be placed with appropriate measures to control heat of hydration.

FEATURES AND BENEFITS

Rapid High Early Strength	Rapid commissioning of repaired areas and can be placed into service after 4 hours
High Final strength	Strong and durable. Suitable for high structural loading situation
Pourable	Easy to place in narrow and confined areas.
Chloride free	Does not corrode steel.
Prepacked	Ready to use. No batching errors.
Shrinkage compensated	Increasing durability

TYPICAL PERFORMANCE DATA

Compressive Strength (ASTM C109-1992)

2 hours	: 20 N/mm^2
4 hours	: 40 N/mm^2
1 day	: 50 N/mm^2
3 days	: 55 N/mm^2
28 days	: 60 N/mm^2
Bond to concrete	: > tensile strength of concrete
Flow (ASTM C230)	: 200 mm @ 1 minute
Working life	: 20 minutes
Setting Time	: 40 minutes

PROPERTIES

Supply form	: powder
Color	: cement grey
Density (wet)	: 2.30 kg/L

APPLICATION

Surface Preparation

Correct substrate preparation is critical for optimum performance.

Surfaces should be structurally sound, clean, and free from loose particles, oil, grease, or any other contaminants. Cement laitance, loose particles, oil, grease, mould release agent, curing membrane, and other contaminants must be removed by wet grit blasting, high pressure water jetting (approx 150 bars) or such other effective methods.

Saw cut the boundary of repair area perpendicular to the surface to at least 10 mm depth. Hack off at least top 10 mm of concrete in the repair area. Prepare the surface of the concrete to a rough profile with a surface level difference of at least 5 mm between trough and ridge. Where saw cutting is not possible, a minimum of 10 mm should be hacked out. Where required, cut back the concrete to at least 25 mm behind the rebars. Remove all corrosion products from the rebars by grit blasting or other suitable technique. Replace the effected part of rebar if the diameter after grit blasting is found to be reduced by more than 20% of the original diameter.

Note : It is recommended that the decision on replacement of rebars is taken based on the advice of the structural engineer responsible for the works.

In a chloride laden environment, the rebars are recommended to be coated with BARRAFER S or EMACO S40 ZR (Barrazinc SP) zinc rich primer.

Place a 50 mm square welded steel mesh in mid section. Anchor the mesh firmly to the substrate or to the exposed steel so as to allow 15-20 mm cover over the mesh when the repair is completed.

Saturate the surface thoroughly with clean water before applying the mortar.

Formwork

Proper design of formwork, wherever required, is essential for effective repair.

The forms must be of good quality, treated with a chemical release agent such as RHEOFINISH 202 for smooth release. provided with water drain holes, strong and well braced to withstand the fluid pressure of the mortar until it hardens.

Vertical faces *:* Construct a post box type shuttering with an inlet for the pumped mortar at the bottom and an air vent at the top.

If placing by pouring, provide a flexible tube down to the bottom with a funnel to filter down the mortar, in which case no holes are required.

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Horizontal faces : (e.g. - beneath soffit), introduce the tremmie pipe at the bottom through a hole in the shuttering and provide for venting air from the top.

Several hours prior to placing **EMACO T288**, pre-soak the substrate with clean water. Immediately prior to placing of mortar, drain the excess water through the drain holes and plug the holes.

Mixing

Mechanical mixing is necessary.

Place approximately 80% of the water in the mixer. Keeping the mixer running, add **EMACO T288** continuously. Add the remaining water while continuing to mix until fully homogeneous. Maximum mixing time is 3 minutes. (Do not mix for longer than this time to ensure that the available working life is not reduced).

Water requirement (Pourable)

11 to 12% by weight of the powder depending on the ambient conditions at site. i.e. 2.75-3.00 L/25 kg.

Placing

Place the mixed mortar as soon as possible after mixing.

For best results, pour the mortar continuously until the mortar completely fills the space. Tamp the mortar to ensure fully compaction.

Note : If it is required to repair to a thickness greater than 150 mm, consult BASF Construction Chemicals representative for advice on appropriate measures to be taken.

Curing

Commence curing immediately after finishing by applying a uniform coat of a BASF Construction Chemicals' curing compound such as MASTERKURE 181 or MASTERKURE 100WB.

EQUIPMENT

Mixing : Mechanically powered mixer (Jiffy Mixer)

CLEANING

Clean tools and equipment with water, before the mortar hardens.

ESTIMATING DATA

A 25 kg bag of **EMACO T288** mixed with 2.75 L of water yields 12.0 L (0.012 m^3).

PACKAGING

25 kg, multi-ply paper sacks with polythene liner.

SHELF LIFE

EMACO T288 can be stored in tightly sealed original bags for up to 6 months, if kept dry and at an even temperature.

PRECAUTIONS

Health : **EMACO T288** is alkaline like normal cement and can cause skin irritation to persons with sensitive skin. Wear gloves and mask while handling the product. Take all precautions normally taken when handling cement.

For detailed Health, Safety and Environmental recommendations, please consult or follow all instruction on the product Material Safety Data Sheet.

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BASF Construction Chemicals offices in ASEAN

Singapore	Malaysia	Indonesia	Thailand	Vietnam	Philippines
Tel: +65-6861-6766	Tel: +60-3-5628-3888	Tel: +62-21-526-2481	Tel: +66-2-664-9222	Tel: +84-650-374-3100	Tel: +63-2-811-8000
Fax: +65-6861-3186	Fax: +60-3-5628-3776	Fax: +62-21-526-2541	Fax: +66-2-664-9267	Fax: +84-650-374-3200	Fax: +63-2-838-1025

Website: www.ap.cc.basf.com