



The Chemical Company

EMACO[®] T320

Rapid Setting, Patching Mortar for Traffic-Bearing Concrete

Description of Product

EMACO[®] T320 is a rapid setting patch repair mortar for horizontal repairs to concrete, subject to traffic loading.

Durability, wear and abrasion resistance may be improved by including THORO[®] ACRYL 60 liquid acrylic polymer additive at the rate of 1 part THORO[®] ACRYL 60 to 3 parts water.

Application depth, 5mm to 50mm.

Fields of Application

Patch repairs to:

- Roads
- Bridges
- Car Parks
- Factory or warehouse floors
- Airport runways and aprons

Features and Benefits

- Areas may be opened to traffic after 1 hour
- May be 'bulked out' for deeper section repairs
- Durable, resistant to wear, weather, de-icing salts and frost
- No priming required

Typical Properties (a)/ Technical Data

Wet density, kg/m ³	2280
Pot life, minutes	10
Initial setting time, minutes	10
Final setting time, minutes	15
Modulus of elasticity, kN/mm ²	20.7
Coefficient of thermal expansion, mm/mm/°C	5.4 x 10 ⁻⁶
Compressive strength, N/mm ²	
1 hour	12
24 hours	30
28 days	72
Tensile strength (28 days), N/mm ²	4.6
Flexural strength (28 days), N/mm ²	9.8
Adhesive strength (28 days), N/mm ²	2.0

(a) Typical values at 20°C

Application Procedure

Substrate Quality

Substrates to be treated must be completely clean, structurally sound and mechanically keyed. All substrate coatings, defective renders, foreign matter, formwork treatments and other contaminants that may affect the bond adversely should be removed.

Preparation

The edges of the repair area must be cut square to give a minimum depth of 5 mm. Remove all damaged concrete back to a sound base and expose the full circumference of any reinforcement steel to give 15mm of clear cover behind the steel.

Ultra high-pressure water methods are preferred. If percussion tools are used, ensure that the cutting edges are maintained in a sharp condition.

Remove all loose rust and scale from the reinforcement by use of a needle gun or by abrasive blasting: wire brushing is not recommended.

Apply two coats of EMACO[®] NANOCRETE AP primer to any exposed steel.

Thoroughly pre soak the substrate with clean water. Remove any standing water prior to the application of the materials.

Mixing and Application of Bonding Slurry

A small amount of EMACO[®] T320 should be hand mixed with a suitable trowel in a clean container, adding the liquid to the powder. Mix until a thick lump-free consistency is obtained, suitable for application with a stiff brush.

Mix only sufficient material that can be placed within 10 minutes at 20°C or less at higher temperatures.

Brush the mixed slurry into the dampened surface ensuring complete coverage of the edges.



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Mixing and Application of Repair Mortar Liquid Requirement

EMACO[®] T320 can be mixed with clean water or a blend of THORO[®] ACRYL 60 and water. Water only is sufficient for most applications. Where increased physical properties are required or where drying conditions are severe, for example, temperatures above 25°C, the addition of THORO[®] ACRYL 60 is advised.

When mixing with water only, the maximum quantity is 3.5 litres of clean water per 25kg of EMACO T320.

When adding THORO[®] ACRYL 60 (1 part of THORO[®] ACRYL 60 to 3 parts of water) the liquid requirement is 3.2 litres per 25kg of EMACO[®] T320.

The liquid requirement will vary slightly depending upon ambient conditions. In all cases it is the consistency of the mixed material that is important. *Do not re-temper.*

Mix in a clean drum, using a suitable mixing paddle in a slow speed drill (400-600 rpm). For larger amounts a forced action mixer such as a Mixal or Creteangle may be used.

Place up to 3.2 -3.5 litres of liquid/water into a suitable mixing drum, add the powder to the liquid as you mix and continue mixing for 3-5 minutes, to achieve a homogeneous and lump free mortar.

Apply the mortar onto the slurry *before* it dries out, pushing it firmly into place and compacting it in layers not exceeding 20mm.

A repair should have a minimum depth of 5mm and a maximum depth of 50mm per application. Deeper repairs can be carried out more economically by dry blending 12.5kg of clean aggregate (6-10mm) to 25kg of EMACO T320 powder before adding it to the mixing liquid.

EMACO[®] T320 can be finished by trowel or textured with a broom for increased slip resistance.

Do not apply to frozen substrates or if the ambient temperature is below 5°C or expected to fall below 5°C within 8 hours.

Curing

EMACO[®] T320 should be cured immediately after application using MASTERKURE[®] 181 Curing Membrane.

In cool conditions (5-10°C) it is advisable to cover the application with an insulating material, such as polystyrene, to assist setting.

Coverage

EMACO[®] T320 yields 12.5 litres per 25 kg bag. Approximately 1.0 m² per 25 kg bag at 12.5mm depth. One cubic metre requires approximately 80 x 25kg of powder.

Packaging

EMACO[®] T320 is available in 25kg bags. THORO[®] ACRYL 60 is available in 5 and 20 litre plastic containers.

Storage

EMACO[®] T320 should be stored under cover, clear of the ground and stacked not more than 6 bags high. Protect the materials from all sources of moisture and frost.

Shelf Life

Rotate the stock in order not to exceed the shelf life of 6 months for EMACO[®] T320 and 12 months for THORO[®] ACRYL 60.

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Powder Products

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes, which should be protected during use.

Spillage

Chemical products can cause damage; clean spillage immediately.

Disclaimer:

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