



The Chemical Company

THORO[®] PATCH

Polymer Modified Patching Mortar for Horizontal Concrete Surfaces

Description of Product

THORO[®] PATCH is a durable, hard wearing, weather resistant patch repair mortar for thin section repairs to horizontal concrete surfaces. The cured material dries to a natural concrete colour.

Application depth, 5mm to 40mm.

Fields of Application

Thin section patch repairs to horizontal concrete surfaces such as:

- Worn or damaged stair treads and landings
- Frost damaged floors, roads, pathways
- Warehouse floors
- Loading bay areas
- Bridge decks

Features and Benefits

- Durable, hard wearing, weather resistant
- Trowels to smooth concrete colour finish
- May be opened to foot traffic after 24 hours (Heavy traffic in 4 days)

Typical Properties (a)/Technical Data

Wet density, kg/m ³	2000
Pot life, minutes	20
Initial setting time, hours	5
Final setting time, hours	6½
Compressive strength, N/mm ²	
1 day	11
7 days	23
28 days	32
Tensile strength (28 days), N/mm ²	4.5
Flexural strength (28 days), N/mm ²	7.0
Adhesive strength (28 days), N/mm ²	1.7

(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.

Substrate Preparation

Although THORO[®] PATCH may be feather edged, it is advisable that the edges of the repair area should be cut to minimum depth of 5 mm.

Remove all damaged concrete back to a sound base and expose the full circumference of any reinforcement 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.

Mixing

Liquid Requirement

THORO[®] PATCH should be mixed with a total liquid content of 3.7ltrs (maximum).

This may be either:

- 1:1 mix of THORO[®] ACRYL 60 acrylic polymer with water.
- Neat THORO[®] ACRYL 60 acrylic polymer, to maximise the mechanical, physical and chemical resistance.

The liquid requirement may vary slightly depending upon the ambient temperature.

Mixing by hand

If mixing by hand add liquid to powder in a clean container whilst stirring with a suitable mixing paddle or trowel.

Mechanical mixing

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 3.7 litres of liquid 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.



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Bonding Slurry

Mix a small amount of THORO® PATCH powder with a little of the liquid to form a lump free, thick and creamy consistency suitable for application with a stiff brush. Mix only sufficient material to cover approximately 1 - 2m² as the bonding slurry must remain moist whilst the patching mortar is applied.

Patching Mortar

Mix the powder and liquid until a cohesive mix is obtained with sufficient stiffness to be compressed in the hand.

Note: Do not overmix as this will lead to a severe reduction in the products ultimate performance.

Mix only sufficient material that can be placed within 20 minutes.

Application

Do not apply to frozen substrates or if the ambient temperature is below 5°C or expected to fall below 5°C within 24 hours.

Dampen the prepared area thoroughly, making sure there is no free-standing water. Brush the bonding slurry firmly into the surface using a hard brush, completely covering the area to be repaired. *Do not allow to dry out.*

Trowel THORO® PATCH patching mortar into place in layers not exceeding 20mm, using firm pressure to achieve full compaction. For patches up to 40mm in depth, layers may be placed wet-on-wet. For deeper patches, allow each 40mm application to reach its initial set before continuing repair, scratching the surface to provide a key and applying the bonding slurry as described above.

Smooth finishes are best obtained with a stainless steel trowel once stiffening of the mortar has started. *Do not over trowel.*

Patched surfaces can be textured by brush or broom.

Curing

Fog spray with clean water or cover with polythene or wet hessian for 24 hours after the initial set has taken place.

In temperatures between 5 and 10°C cover with insulated tarpaulins or other insulating material as soon as possible for 24 hours.

Do not use curing compounds.

Coverage

THORO® PATCH yields 14.3 litres per 25 kg bag. Approximately 1.0 m² per 25 kg bag at 15mm depth. One cubic metre requires approximately 70 x 25kg of powder.

Packaging

THORO® PATCH is available in 25kg bags. THORO® ACRYL 60 is available in 5 and 20 litre plastic containers.

Storage

THORO® PATCH 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 stock in order not to exceed the shelf life of 6 months for THORO® PATCH 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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