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EMACO APS® T2040

Advanced polymer mortar for traffic area repairs

DESCRIPTION

EMACO APS T2040 is a fast setting three component screedable patching mortar for floors utilising natural aggregate and binder based on the new APS polymer technology. It offers excellent resistance against impact, abrasion and scratching as well as chemical attack.
EMACO APS T2040 is available in three versions differentiated by their setting speeds and the ranges of application temperature.

Versions	Temperature range
EMACO APS T2040 slow	25°C to 45°C
EMACO APS T2040 Normal	5°C to 25°C
EMACO APS T2040 Rapid	-25°C to 5°C

FIELDS OF APPLICATION

EMACO APS T2040 is particularly suitable in situations where a minimum shutdown time is essential, and where repairs on floors must be back in service in 3-6 hours, and where repairs are needed to be made in sub zero temperatures. Applications include repairs to traffic areas of ;

- cold storage and freezer rooms
- airport runways and taxi ways
- container ports and terminals
- floors of food & beverage industries
- car parks, bridge decks, etc.

FEATURES AND BENEFITS

Wide application temperatures	Effective from subzero to hot tropical temperatures.
Non tainting	Can be used in food industry.
Rapid setting	High early and ultimate strengths for minimum shutdown time.
Low odour, non flammable and low toxicity.	Safe. Only minimum precautions required while handling.
No priming required. Bonds to damp surfaces.	Application friendly. Avoids labour for priming and drying surface. Saves time.
Low modulus	Absorbs shocks, vibrations and other mechanical stresses.
Pre-packaged	Components only need mixing together. No batching errors.
Chemical resistance	Suitable for applications in wide range of industries.

TYPICAL PERFORMANCE DATA

	3 Hours	7 Days
Compressive strength (DIN EN 196-1)	45 N/mm^2	80 N/mm^2
Flexural strength (DIN EN 196-1)	20 N/mm^2	30 N/mm^2
Modulus of elasticity (DIN 1048)	4,500 N/mm^2	9,000 N/mm^2

Impact resistance (DIN 53453) : 1,200 to 1,400 J/m^2
Abrasion resistance (ASTM D 4060/90) : 11 mg/1000R (sanded)
Bond strength (ZTV - SIB) : >3.5 N/mm^2
Bond strength (on moist substrate) : >2.5 N/mm^2

PROPERTIES

	Part A	Part B	Part C
Supply form	Liquid	Paste	Powder
Colour	Clear	Grey	Grey

Pot life (normal version) @ 20°C (DIN 16 945) : 40 - 45 mins
Tack free time @ 20°C (normal version) : 2 hours (sanded) 6 hours (unsanded)
Application thickness : 3 mm to 400 mm
Workability (normal version) @ 20°C (DIN 18 555) : 200%
Density (mixed) : 2.35 kg/L
Application temperature (Refer to version table) : - 25°C to 45°C
Chemical resistance : Excellent

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 contaminant.
Cement laitence, loose particles, mould release agent, curing membrane, and other contaminants must be removed by shot blasting / scarifier or such other effective methods.

Where deeper removal of concrete is required to obtain a sound base, first saw cut the boundary of repair area perpendicular to the surface to at least 10 mm depth.

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 affected part of rebar if the diameter after grit blasting is found to be reduced by more than 20% of the original diameter.

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

Remove any standing water and excess moisture by vacuuming, rags, oil free compressed air or by a hot air blower.

Mixing

Mechanical mixing is necessary. Hand held mixers are not suitable for this product. Mix the entire contents of the pack to ensure correct proportioning of the components and optimum homogeneity.

Pour the entire contents of component A into the mixer followed by the contents of component C. Mix for approximately 1 minute to obtain a homogenous lump free mass. Then add the full contents of component B (normal/slow/rapid) to the mixture and mix for another 2 minutes.

If the thickness being applied exceeds 18 mm, mix washed and oven dried aggregate to the mixed **EMACO APS T2040** according to the guide lines given below (for a 25.3 kg pack).

Layer thickness	Aggregate grading	Quantity
3 - 18 mm	nil	nil
18 - 100 mm	4-8 mm	10 kg
100 - 400 mm	4-8 mm 8-16 mm	5 kg 5 kg

Placing

Place the mixed **EMACO APS T2040** immediately. The duration of workability retention depends upon the version being used.

Version	Workability retention
EMACO APS T2040 Slow	40 mins @ 30°C
EMACO APS T2040 Normal	40-45 mins @ 20°C
EMACO APS T2040 Rapid	30 mins @ 0°C

EMACO APS T2040 as supplied does not require any priming prior to placing. Where thickness to be applied requires the addition of aggregates as described above, priming may be necessary to achieve optimum bond using **EMACO APS T2040** as supplied or MASTERTOP APS 2001.

For best results, apply the whole area in one continuous operation. For repairing any pot holes, pour the mixed mortar into the cavity and smooth the surface with a trowel. When the surface is tacky, broadcast F1 sand (0.1-0.3 mm) and remove excess sand by vacuuming or brooming after the repair has set.

For large traffic area repair, use a trowel bar mounted on a sledge or a screed box to distribute the material evenly over the floor area, while a second man trowels over the surface.

When the surface is tacky broadcast F1 sand and remove the excess after the repair has set.

Surface sealing

To obtain a sealed, smooth surface, coat the repaired surface with MASTERTOP APS 2001 immediately after removing the excess sand. MASTERTOP APS 2001 can be applied with a rubber squeegee followed by rolling with a suitable paint roller.

Curing

EMACO APS T2040 is self curing. Depending on the ambient conditions, the applied area can be opened to traffic 3 - 6 hours after mixing the mortar.

The final surface may for a short period of time exhibit a degree of residual 'tack'. This can be eliminated by broadcasting with clean sand and removing the excess once the repair has set.

EQUIPMENT

Mixing **:** Mechanically powered mixer

CLEANING

Clean all tools and equipment with soapy water and rags before the material sets. Fully set material can be removed from tools mechanically by scraping and using a blow torch.

ESTIMATING DATA

Material requirement is 2.3 kg/m^2 per 1 mm thick application.

PACKAGING

EMACO APS T2040 is supplied in 10.11 kg and 25.3 kg packs with the individual weights of the components as below.

	10.11 kg (Pre-packed in a 10 L bucket)	**25.3 kg** (Components packed separately)
Comp A	0.95 kg	2.4 kg
Comp B	0.16 kg	0.4 kg
Comp C	9.00 kg	22.5 kg

SHELF LIFE

EMACO APS T2040 can be stored in tightly sealed original packing for up to 6 months, if stored in a dry and enclosed place between 5°C and 25°C.

PRECAUTIONS

For detailed Health, Safety and Environmental recommendations please consult and follow all instructions in the product Material Safety Data Sheet.

Fire : EMACO APS T2005 is not flammable.

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