



Technical data sheet

CM 405-1 EP Primer

1. Product description

CM 405-1 is a 2 component, solvent free epoxy resin primer. Both, resin and hardener components are formulated; the resin component is blended with fillers to a thixotropic consistency.

2. Fields of application

- Corrosion protection of reinforcing steel in concrete structures
- As a primer for the repair of concrete when using epoxy mortar or cementitious mortar.
- As a primer for new and old concrete

3. Product features

- Ready to use work packs ensure correct mixing
- Good consistency for horizontal, vertical and overhead application
- Impermeable to air and water, ensuring protection of reinforcement steel
- The consistency of the CM 405-1 allows the correct thickness to be applied to steel or concrete without sag or run-off
- Excellent adhesion

4. Packing

Ready to use work pack	Item no.
CM 405-1: 0.5 kg	306923/4
Component A: 0.380 kg	
Component B: 0.120 kg reclosable	

5. Technical data

5.1 Product as supplied

Component A (resin)	grey paste
Component B (hardener)	clear liquid

5.2 Density of cured product at 23°C

~1.30 g/cm³

5.3 Mechanical properties after 7 days at 23°C

Compressive strength: ¹⁾	>40 N/mm ²
Shear strength with 60° slanting joint: ²⁾	>15 N/mm ²
Adhesive strength on concrete: ²⁾	concrete failure
Adhesive strength on steel: ³⁾	>10 N/mm ²

¹⁾ DIN 1164

²⁾³⁾ Sattec (~ISO 4624)

5.4 Curing at 23°C

Tack-free	after 3 hours
Retouchable	after 4–24 hours
Full cure:	after 7 days

5.5 Compatibility of CM 405-1

CM 405-1 can be applied as a primer on steel, concrete, natural and synthetic stone, masonry, brick and mineral based plasters in conjunction with epoxy resin based mortars.

6. Application data

6.1 Mixing ratio

Component A : Component B = 3.2 : 1 parts by weight

6.2 Consumption

Approx. 0.5–0.8 kg CM 405-1 per m² and at 1 mm thickness

6.3 Limitations

Min. substrate temperature:	+10°C
Max. permissible moisture content of substrate:	+ 4°C
Min. temperature of CM 405-1 for mixing:	+10°C
Min. temperature for curing:	+10°C

6.4 Pretreatment of substrate

The substrate must be sound, clean and free from oil and grease. All loose material and laitance should be removed by shotblasting, flame-scaling, or by hand tools such as needle guns or wire brushes. Corroded steel reinforcement should be exposed and shotblasted to Swedish Standard SA 2^{1/2} (bright metal).

6.5 Mixing

1. Pour component B completely into component A.
2. Mix both components thoroughly using a suitable spatula until a fully homogeneous mixture is obtained.
Mixing time: approx. 3 minutes.



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6.6 Pot life

The prepared mix should be used up immediately, at least within:

- 150 minutes at 10°C
- 40 minutes at 20°C
- 20 minutes at 30°C

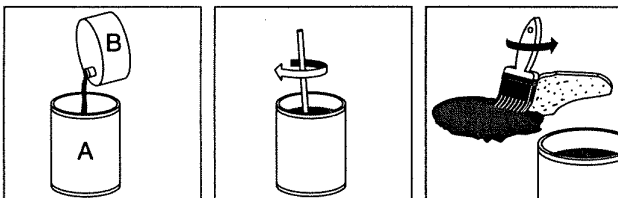
6.7 Placing

A) As a primer when using epoxy mortars:

1. Apply a protective layer of CM 405-1 to all exposed reinforcing steel (coverage rate, 500 g/m²).
2. Within the specified overcoating time apply a second layer of CM 405-1 to all exposed steel and concrete as a bonding agent prior to placing epoxy mortar (coverage rate, 400–600 g/m²).
3. Apply the EP Mortar to the still tacky CM 405-1.

B) As a protective coating for exposed reinforcing steel prior to refilling with hydraulic mortars:

1. Apply a protective layer of CM 405-1 to all exposed reinforcing steel (coverage rate, 500 g/m²).
2. Within the specified overcoating time apply a second layer of CM 405-1 to all exposed steel. Immediately spray the coating with dry silica sand, grain size 0.2–0.7 mm.
3. Cure for min. 24 hours before application of hydraulic materials. Protect from rain and dew during cure.



6.8 Overcoating time of CM 405-1

Application times for concrete or mortars

- max. 10 hours at 10°C
- max. 3½ hours at 25°C
- max. 2 hours at 35°C

If the stipulated max. hours are exceeded, the surfaces have to be abraded prior to overcoating.

6.9 Cleaning of tools

Tools must be cleaned immediately after use with solvents e. g. toluene, acetone, methylethylketone (MEK) etc.

7. Storage

The product can be stored during 18 months in a dry place in unopened original packaging. Do not store at temperatures below +10°C or in direct sunlight.

8. Safety precautions

After full curing, CM 405-1 EP Primer is physiologically harmless. Keep the resin and hardener away from the eyes, mouth and skin, do not inhale vapours. The uncured mixture can cause irritation of the skin. The best protection is to wear protective gloves and goggles while working. Skin contaminations should be immediately cleaned with soap and plenty of water. The use of solvents has to be avoided. If resin or hardener enter the eyes, wash immediately with running water. A doctor must be visited in all cases.

The empty containers may contain residues of the product and should not be used for any purpose.