



Method Statement

Ref. #: DCP00/06-0009-A-2022



Strongcoat 400

[Nontoxic solvent free epoxy protective coating for concrete and metal]



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Section A: General Comments

General Notes:

The information below is a detailed overview of the application of DCP's **Strongcoat 400** epoxy protective coating system and should be read in conjunction with the relevant technical data sheet prior to application. All DCP Products should be applied by experienced specialist contractors.

All the points below assume the correct preparation of the relevant surface.

High-Temperature Working:

Application temperature ranges from 10°C to 35°C. However, it is suggested that, for temperatures above 30°C, the following guidelines are adopted as good working practice:

- i. Unmixed materials and equipment should be stored in a cool place and away from direct sunlight.
- ii. Avoid application during the peak temperature of the day.
- iii. Ensure proper and adequate ventilation.
- iv. Plan for enough materials, tools, and labor to ensure a continuous applicant process.

Low-Temperature Working:

It is suggested that, for temperatures below 5°C, the following guidelines are adopted as good working practice:

- i. Unmixed materials should be stored in a warm.
- ii. Do not apply under rain or snow, and avoid dew points conditions during application.
- iii. Avoid applying the product if the temperature is around 5°C and falling.
- iv. Avoid dew point conditions before and during product application.

System Products:

Epoxy paste: **Quickmast 341**.

Coating: **Strongcoat 400**.

Tools and Equipment:

It is suggested that the following list of equipment are adopted as a minimum requirement

Personal protection

- : Protective overalls
- : Goggles or a face mask
- : Good quality gloves
- : Safety shoes
- : Safety helmet



Equipment

- : Mixing paddle fitted in a heavy-duty slow speed electric drill (Fig.1)
- : Brush (Fig.2)
- : Lambs wool roller (Fig.3)
- : Airless spray (Fig.4)
- : Masking tape (Fig.5)



Fig.1: Mixing paddle fitted in a heavy-duty slow speed electric drill



Fig.2: Brush



Fig.3: Lambs wool roller



Fig.5: Airless spray

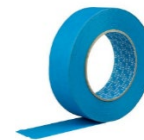


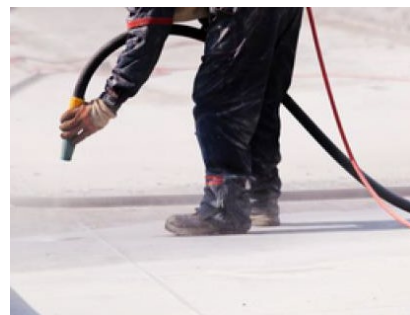
Fig.6: Masking tape

Section B: Application

1.0 Substrate Preparation

1.1 Concrete Surfaces

- 1.1.1 Fully cured Concrete substrates should achieve a minimum compressive strength of 25 N/mm² and a minimum pull-off strength of 1.5 N/mm².
- 1.1.2 Moisture content of new concrete or any cementations substrates should be less than 4% or relative humidity less than 80%. Normally this range of moisture content can be achieved by concrete age over 28 days.
- 1.1.3 The area to be coated shall be marked on the drawings and on the structure. All areas not to be coated, but which may be affected by spillage or overspray shall be fully masked.
- 1.1.4 Excess laitance, old coating, mortar, paint splashes, or surface treatments are best removed, substrates must be prepared mechanically using suitable abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface suitable for the product thickness. All preparation equipment should be of a type approved by DCP.
- 1.1.5 Oil and grease contamination must be completely removed using degreasing products, hot compressed air, torching, or any other suitable method which assures the surface is free from any oil traces.
- 1.1.6 Any traces of mould or algae must be removed and the area to be treated with a suitable fungicide or bleach solution.
- 1.1.7 Surface defects and imperfections such as voids and deep cracks should be repaired before application. Consult the DCP's Technical Department for specific recommendations.
- 1.1.8 All exposed blow holes should be filled with the epoxy paste using **Quickmast 341**.

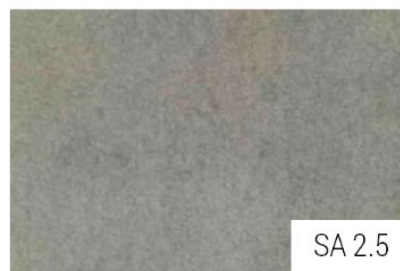


1.2 Steel Surfaces

1.2.1 If the application will take place on steel substrate, the surface must be clean and free from rust or other contaminants.

1.2.2 All previous surface treatments shall be removed until reaching the base metal.

1.2.3 All steel surfaces should be grit blasted to reach a bright, near white finish meeting the requirement of Swedish Standard SA 2 ½.



2.0 Priming

2.1 **Strongcoat 400** is designed to be applied over well-prepared steel and concrete substrates directly without a primer.

2.2 If the application will take place over other substrates, please consult DCP's Technical department for advice

3.0 Mixing

3.1 Stir **Strongcoat 400** individual components (Base, Hardener) thoroughly before mixing to disperse any settlement.

3.2 A slow speed drill fitted with a mixing paddle should be used for mixing.

3.3 Pour the Base into a suitable drum and start adding the Hardener to the base component gradually while continuous mixing is maintained using a slow speed mixer fitted with a suitable paddle.

3.4 Continue mixing for 3 minutes until a homogenous colour and consistency are achieved.



Notes:

- *Never mix **Strongcoat 400** by hand as this could lead to areas of uncured material.*
- *Ensure that sufficient labor is available to enable continuous mixing and application.*
- *Do not mix part of packs under any condition, as this will change the mixing ratio between the hardener and the base which will affect the material performance.*
- *While mixing, ensure that the mixing blade is kept below the surface of the epoxy mix to prevent air entrapment.*

4.0 Application

4.1 Mixed **Strongcoat 400** can be applied by brush; roller or airless spray machine such as (Graco mark V or Graco mark X).

4.2 For spray application, **Strongcoat 400** needs to be diluted using thinner with (5 – 10% by volume) before use.

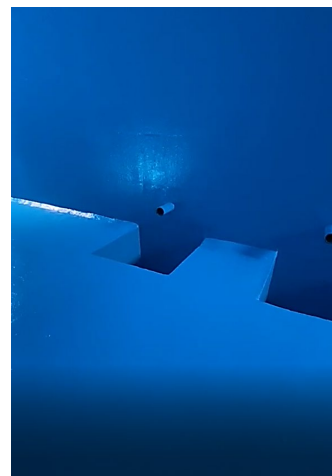
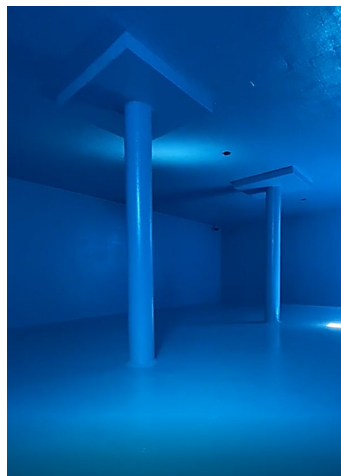
- 4.3 Mixed **Strongcoat 400** should be applied within the product's pot life depending on the ambient temperature (100 min @ 25°C and 45 min @ 35°C).

Note: if extended pot life is required, dilution with solvent 5 % max can be done, Consult DCP's Technical Department for more information.

- 4.4 Each independent area of application should have sufficient materials, equipment, and labour.
- 4.5 If necessary, avoid contact with other substrates or structures by masking off edges with tape which is then removed while **Strongcoat 400** is still wet.
- 4.6 Once mixing is completed, apply the first coat of **Strongcoat 400** evenly at a rate of 0.30 - 0.35 kg/m² per coat to achieve 200 microns dry film thickness.
- 4.7 The first coat should be applied to obtain a continuous uniform coating.



- 4.8 The second coat should be applied within the overcoating time (4 hr - 24 hr) @ 25°C to achieve the maximum adhesion between the two coats.
- 4.9 The second coat of **Strongcoat 400** can be applied perpendicular to the first coat at a rate of 0.30 - 0.35 kg/m² per coat to achieve 200 microns dry film thickness.
- 4.10 If the over coating time is exceeded; the first coat must be abraded with sand paper to provide an adequate mechanical key then wiped with xylene solvent immediately prior to the application of the second coat.
- 4.11 Two coats of **Strongcoat 400** should be applied to achieve a total of 400 microns dry film thickness.



Notes:

- Check the substrate in advance. Ensure that the substrate is clean, dry, and in good condition.
- **Strongcoat 400** should not be applied over existing coatings. However, it can be applied on top of itself, by maintaining the mentioned overcoating time.



- *Proper preparation will eliminate the majority of installation failures.*
- *If pinholes, craters, and bubbles appear after the application of the first or final coat, or for any other patch repair, the surface should be lightly sanded and wiped with xylene solvent, and material should be applied with the roller to match the existing thickness of already applied material.*

5.0 Cleaning

- 5.1 All tools used with **Strongcoat 400** must be cleaned immediately after application using DCP Solvent.
- 5.2 Hardened materials must be cleaned mechanically.

6.0 Limitations

- 6.1 Special care should be taken to provide an unbroken coating at external corners and similarly exposed protrusions.
- 6.2 **Strongcoat 400** application should not commence if the temperature is below 5°C, nor when the relative humidity exceeds 90%.
- 6.3 **Strongcoat 400** doesn't require any special curing but must be protected from rain, damp, condensation, and water for at least 12 - 24 hours.
- 6.4 Application should not be carried out when there is standing or running water.
- 6.5 Allow **Strongcoat 400** to completely cure for at least 7 days (at 25°C), before exposing to chemicals, longer curing times will be needed at lower temperatures.
- 6.6 **Strongcoat 400** is not colour stable when exposed to direct sunlight nor when in contact with some chemicals. However, this colour change does not affect the performance of the coating.
- 6.6.1 Precaution is recommended if the application is taking place at high temperatures (above 30°C).

Section C: Cautions

Health and safety

Strongcoat 400 should not come into contact with skin or eyes. Goggles and gloves should be used. In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

Fire:

Strongcoat 400 is nonflammable.

For further information on refer to the Material Safety Data Sheet.

Section D : Approval and Variations

This method statement is offered by DCP as a 'standard proposal' for the application of **Strongcoat 400**. It remains the responsibility of the Engineer to determine the correct method for any given application. Where alternative methods are to be used, these must be submitted to DCP for approval, in writing, prior to commencement of any work. DCP will not accept responsibility or liability for variations to the above method statement under any other condition.