Method Statement

Ref. #: DCP00/05-0115-A-2022

Sethard S100

(Liquid Hardener and Dust Proofer for Concrete Surfaces)

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Section A : General Comments

General Notes:

The information below is a detailed overview of the application of DCP's **Sethard S100** flooring 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 correct preparation of the relevant surface.

High-Temperature Working:

Application temperature ranges from 5°C - 50°C. However, it is suggested that, for temperatures above 35°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. Plan for enough materials, tools, and labor to ensure a continuous applicant process.

Low-Temperature Working:

It is suggested that, for temperatures below 10°C, the following guidelines are adopted as good working practice:

i. Unmixed materials should be stored in warm conditions.
ii. Cold temperatures will affect the properties of the material.
iii. Do not apply under rain or snow, and avoid dew point conditions during application.
iv. Avoid applying the product if the temperature is around 5 and falling.

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	:	*Standard garden hose (Fig.1)*
	:	*Spray nozzle (Fig.2)*
	:	*Wide soft push broom (Fig.3)*
	:	*Soft rubber squeegee (Fig.4)*
	:	*Low pressure sprayer (Fig.5)*

Fig.1: Standard garden hose

Fig.2: Spray nozzle

Fig.3: Wide soft push broom

Fig.4: Soft rubber squeegee

Fig.5: Low pressure sprayer

Section B : Application

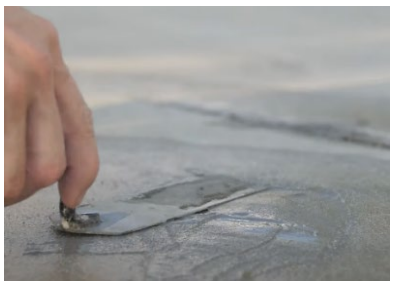
1.0 Substrate Preparation

1.1 For Existing Concrete

1.1.1 The concrete substrate should be clean, sound, smooth, and free from any surface dust or dirt, sealing compound, paints, coatings, or any contamination that would inhibit the penetration of the product such as mortar, paint splashes, curing compounds, oil, and grease.

1.1.2 Excess laitance deposits, organic growth, or any other loose materials are best removed mechanically by light grit blasting to remove any weak or deteriorated concrete.

1.1.3 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 then washed with clean water.



1.1.4 Any surface imperfections, honeycombing, damaged or deteriorated concrete should be repaired with a suitable cementitious repair mortar. Consult the DCP's Technical Department for specific recommendations.

1.1.5 It is essential to ensure that the substrate does not suffer from any conditions of rising damp. If any, alternative preparations must be approved by DCP prior to commencement of work, as the final performance of the system relies upon the performance of sound, level, well-prepared substrates.

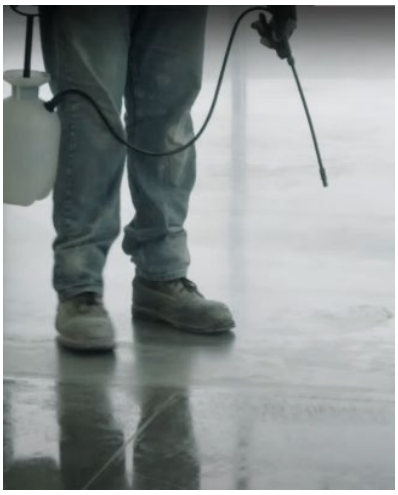
1.2 For Freshly Finished Concrete

1.2.1 No special surface preparation is required.

1.2.2 **Sethard S100** may be applied on newly laid concrete immediately after final troweling, when the surface is firm enough to walk on and before hairline and temperature cracking begins.

1.2.3 All form oil and breaking compound residue must be removed on areas where forms are recently removed in order to avoid inhibiting the penetration of **Sethard S100** into the surface.

2.0 Application



2.1 For Existing Concrete

2.1.1 **Sethard S100** can be applied to cured concrete of any age.

2.1.2 Apply one coat of **Sethard S100** using a low-pressure sprayer.

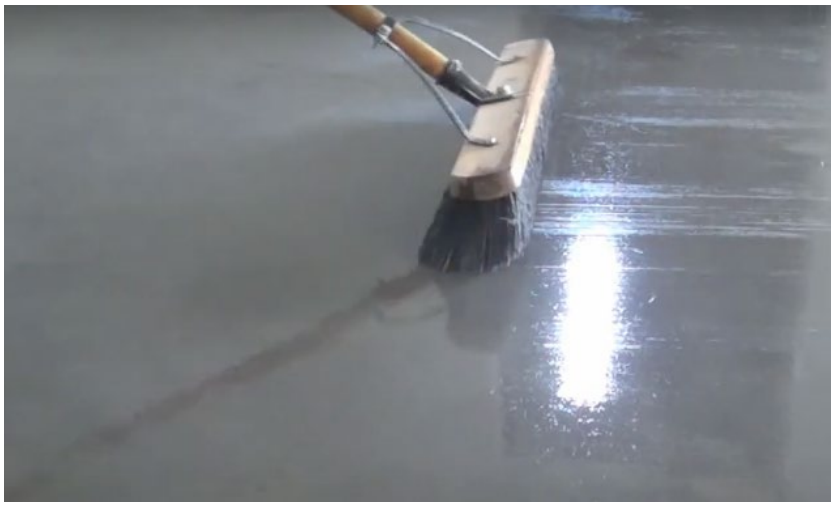
2.1.3 Use a soft bristle broom to evenly spread **Sethard S100** and ensure uniform wetting.

2.1.4 If surfaces dry immediately, apply more materials as the surfaces should remain wet for 30 – 40 minute working it into the concrete surface with the soft bristle broom.

After 30-40 minutes

➢ If the majority of **Sethard S100** has been absorbed into the surface:

Broom or squeegee any excess material (while still in its liquid form) from all low spots and puddles so that all remaining **Sethard S100** is entirely absorbed into the concrete or totally removed from the surface.



➢ If the majority of the **Sethard S100** is still on the surface

Wait until it becomes slippery underfoot, then thoroughly flush the entire surface with clear water and squeegee until completely dry to remove all **Sethard S100** residue.

If the **Sethard S100** becomes slippery prior to the 30 - 40 minute period, follow the instructions for New Concrete Surfaces as below.

2.2 For New Concrete Surfaces

2.2.1 **Sethard S100** should be applied to cured concrete immediately following the troweling operation, and as soon as the slab is safe to walk on.

2.2.2 Saturate the surface by applying one coat of **Sethard S100** at the rate of 4 - 7 m²/litre using a low-pressure sprayer without producing puddles.

Note: Coverage may vary with the application method, surface conditions, and porosity

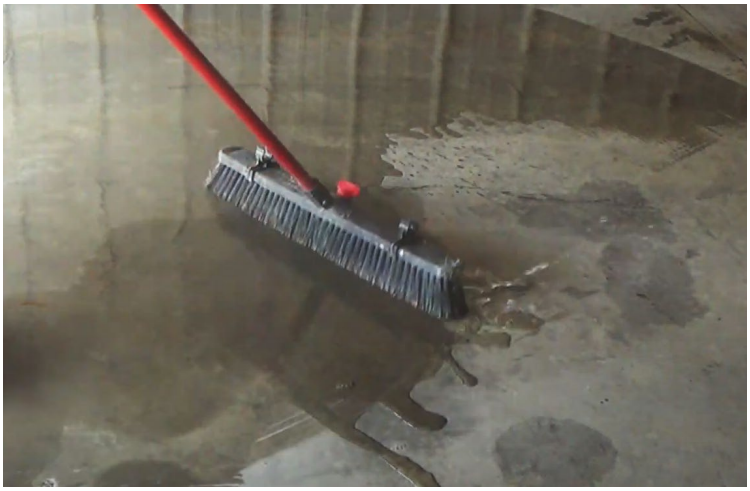
2.2.3 Use a soft bristle broom to evenly spread **Sethard S100** and ensure uniform wetting.

2.2.4 Care must be taken to spread the material well.

2.2.5 If surfaces dry immediately, apply more materials as the surfaces should remain wet for 30 – 40 minutes working it into the concrete surface with the soft bristle broom, this step breaks the surface tension and aids penetration.

2.2.6 Keep the surface wet with **Sethard S100** for a minimum of 30 minutes, and then wait until it becomes slippery and gel-like underfoot.

2.2.7 No spot or area on the slab should be allowed to become dry during the soaking period. It is best to avoid dry areas either by booming excess **Sethard S100** over the more absorbent spots or by applying more **Sethard S100** over the dry spots.



2.2.8 Pay particular attention to porous areas and slab edges, as they tend to dry out more quickly.

2.2.9 **Sethard S100** is a penetrant, not a membrane. There must be enough material on the surface for **Sethard S100** to soak in thoroughly. As a rule of thumb, there should be enough product on the floor to fill in a footprint within a few seconds of stepping.

Notes:

- *In low ambient temperature conditions, **Sethard S100** may take up to 1 hour or longer to become slippery.*
- *In hot conditions, it may begin to become slippery before the 30 minutes wetting period; additional **Sethard S100** should be applied to the concrete in order to keep all areas of the wet for at least 15 - 20 minutes before becoming slippery in these hot conditions.*

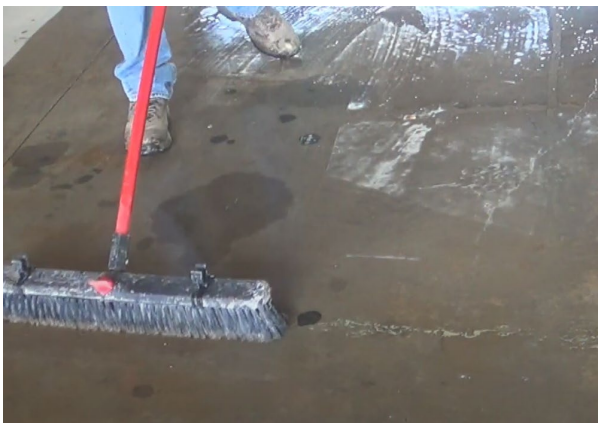
2.2.10 **Sethard S100** may also be applied by pouring it directly on the surface and spreading it evenly with a soft bristle broom.

2.2.11 Where two coats are required to ensure maximum coverage; the second coat should be applied after 2 - 3 hours of applying the first coat

Note: A third coat may be necessary only in the case of very porous floors or surfaces with open finishes, such as broom finished or scarified floors.

2.2.12 Immediately after **Sethard S100** becomes slippery, lightly mist **Sethard S100** with water using a low-pressure sprayer or with a hose and nozzle (the nozzle should be adjusted to create a mist). **Sethard S100** will be re-solubilized in this phase so that it is no longer slippery or gel-like.

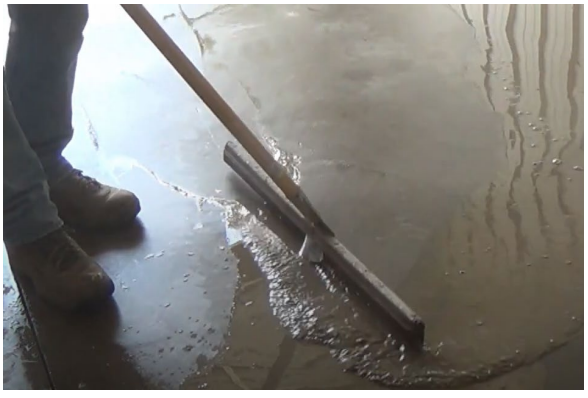
2.2.13 Using a broom, work and agitate the floor to help **Sethard S100** penetrate and wait for **Sethard S100** to become slick or gel-like again.



2.2.14 Rinse the surface well with water at this stage.

2.2.15 The floor should be stirred with brooms during the flushing operation to help loosen and remove excess **Sethard S100** from the surface.

2.2.16 Squeegee the slab completely dry by forcing the water off the slab edge ahead. The floor should appear to be bare concrete with nothing on it.



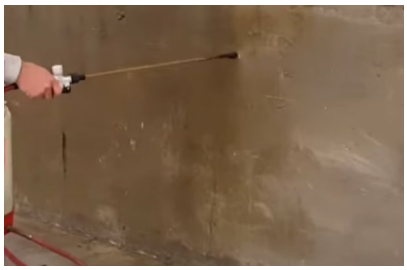
2.2.17 There may be some slippery areas throughout the squeegee operation. This indicates that there is still some **Sethard S100** on the surface. These areas should be re-flushed and squeegeed until the surface is completely dry and clear.

2.2.18 A third coat may be necessary only in the case of very porous floors.

2.3 For Vertical Application

2.3.1 Apply **Sethard S100** to the surface of the wall using a low-pressure sprayer or roller.

2.3.2 Start at the top and work your way down along the wall or vertical surface.



2.3.3 Apply sufficient material to thoroughly wet the surface without allowing excessive amounts to run down the wall.

2.3.4 If any previously sprayed area has fully absorbed the applied **Sethard S100**, re-spray this area.

2.3.5 Ensure that the entire surface is kept damp with **Sethard S100** for 30-40 minutes.

2.3.6 Allow the surface to dry.

2.3.7 If the surface is to be coated or painted or the natural appearance is to be preserved, flush the vertical surface well with water 10 minutes after the initial 30 - 40 minute application period

3.0 Cleaning

3.1 All tools should be cleaned immediately after finishing using clean water.

4.0 Remarks

4.1 Check the substrate in advance. Ensure that the substrate is in good condition and clean.

4.2 Do not use airless sprayers for application, only low-pressure sprayers.

4.3 Saw cutting may be done before or after **Sethard S100** is applied, depending on the immediate need for curing; It is critical that the dust or slurry from cutting be immediately and thoroughly removed from the slab.

4.4 Dusting or erosion problems caused by over troweling, carbonation, or insufficient water-cement ratio cannot be solved using the regular **Sethard S100** coverage rates. However, in some cases, additional coverage rates may solve the problem.

4.5 Avoid contact with glass, aluminum, or other glazed or finished surfaces. Where contact occurs, immediately wipe the surface with a damp cloth or flush with water.

4.6 When applying near windows, mask the glass.

4.7 No standing water should remain after flushing the surface.

4.8 **Sethard S100** is not to be used for lightweight blocks or extremely porous masonry that contains actual voids, holes, and air pockets.

4.9 **Sethard S100** is not a surface retarder. Do not apply during the final troweling operations as discolouration may occur.

4.10 **Sethard S100** should not be applied onto frozen substrates or if the ambient temperature is around 5°C and falling.

4.11 In cases of excessive moisture and extreme hydrostatic pressure from beneath the slab, this reaction does not prevent excessive salt migration.

Section C : Cautions

Health and safety

Sethard S100 should not come into contact with skin and eyes. However, any accidental splashes to the eyes must be rinsed with clean water and seek medical advice.

Fire:

Sethard S100 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 **Sethard S100**. 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.