METHOD STATEMENT
Application of Sikagard® Protective Coatings

AUGUST 2025 / SIKA LIMITED / ROB DOHERTY

BUILDING TRUST

TABLE OF CONTENTS

17

1 SCOPE

This Method Statement describes the step-by-step procedure for applying Sika® protective coatings onto concrete structures.

2 SYSTEM DESCRIPTION

The following Method Statement refers to protective coatings (non-reactive polymer type) applied onto concrete to protect buildings or civil engineering structures against prevailing climatic conditions, gaseous and liquid ingress.



2.1 REFERENCES

This Method Statement has been written in accordance with the recommendations contained in European Standards EN 1504: Products and systems for the protection and repair of concrete structures, and the following relevant parts:

- EN 1504, Part 1: Definitions, requirements, quality control and evaluation of conformity
- EN 1504, Part 10: Site application of products and systems, and quality control of works

This Method Statement also makes references to the recommendations made in the ICRI Technical Guideline No. 03732 – 2002, and to information contained in selected French Standards (NF P 84-404-1 & NF DT 30-808) relating to surface preparation for substrates with existing organic coatings.

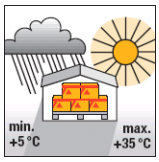
2.2 LIMITATIONS

- Products shall only be applied in accordance with their intended use.
- These protective coatings shall not be subjected to back / negative pressure of water.
- These protective coatings shall not be used in immersion under water.
- Local differences in product may result in performance variations. The most recent and relevant local Product Data Sheets (PDS) and Material Safety Data Sheets (MSDS) shall apply.
- For specific construction / build information, refer to the Architect's, Engineer's or Specialist's details, drawings, specifications and risk assessments.
- All work shall be carried out as directed by a Supervising Officer or a Qualified Engineer.
- This Method Statement is only a guide and shall be adapted to suit local product and standards, legislation or other local requirements.

3 PRODUCTS

Sika® Product Names	Description
Sikagard®-552 W Aquaprimer	Water based primer
Sikagard®-551 S Elastic Primer	Solvent based primer
Sikagard®-550 W Elastic	Basic crack-bridging coat
Sikagard®-5500	Best-in-class crack-bridging protective coating with reduced CO_2 footprint
Sikagard®-545 W Elastofill	Elastomeric pore filler / sealer
Sikagard®-675 W GB ElastoColor	Water based rigid protective thin film protective coating
Sikagard®-680 S Betoncolor	Rigid solvent containing protective thin film coating

3.1 MATERIAL STORAGE



Materials shall be stored properly in undamaged, original, sealed packaging, in dry, cool conditions. Refer to specific information available on the Product Data Sheet regarding minimum and maximum storage temperatures. Do not allow contact with oxidising materials. Protect from moisture.

The packaging should only be opened when product is required, and resealed when not in use. The silica gel parcels should not be removed from the packaging container.

4 HEALTH AND SAFETY

4.1 RISK ASSESSMENT

The risk to health and safety from falling objects or defects in the structure shall be properly assessed.

Where structures are considered to be unsafe, appropriate action shall be carried out to make the working area safe.

4.2 PERSONAL PROTECTION

Work Safely!

Protective clothing must be worn. Wear gloves and eye protection at all times. Always wash hands with suitable soap after handling products and before food consumption.

FOR DETAILED INFORMATION REFER TO THE RELEVANT MATERIAL SAFETY DATA SHEET

4.3 FIRST AID

Seek immediate medical attention in the event of excessive inhalation, ingestion, or eye contact causing irritation. Do not induce vomiting unless directed by medical personnel.

Flush eyes with plenty of clean water, occasionally lifting upper and lower eyelids. Remove contact lenses immediately. Continue to rinse eye for 10 minutes and then seek medical attention.

Rinse contaminated skin with plenty of water. Remove contaminated clothing and continue to rinse for 10 minutes and seek medical attention.

FOR DETAILED INFORMATION REFER TO THE MATERIAL SAFETY DATA SHEET

5 ENVIRONMENT

5.1 CLEANING TOOLS / EQUIPMENT

Immediately after use, clean all tools and application equipment with water (for water-based products) or with appropriate solvent (i.e., Sika® Thinner C for solvent-free or solvent based products). Hardened material can only be mechanically removed. Refer to the respective Product Data Sheet to confirm the Sika® Thinner to be used.

5.2 WASTE DISPOSAL

Do not empty surplus material into drains; dispose responsibly through a licensed waste disposal contractor in accordance with legislation and local / regional authority requirements. Avoid run-off onto soil or into waterways, drains or sewers.

FOR DETAILED INFORMATION REFER TO THE MATERIAL SAFETY DATA SHEET

6 SURFACE PREPARATION

6.1 FOR CONCRETE SURFACE WITHOUT AN EXISTING COATING

6.1.1 GENERAL PREPARATION

The concrete shall be clean and free of dust, dirt, oil, efflorescence and any other residual coatings.

For thin film coating (e.g., Sikagard®-680 S Betoncolor or Sikagard®-675 W GB ElastoColor), preparation is best done by light blast cleaning, steam cleaning, low pressure cleaning (less than 18 MPa / 180 bars), grinding, etc.

Concrete **S**urface **P**rofile shall comply with CSP 1, 2 or 3 as per ICRI 03732-7:

CSP 1

CSP 2

CSP 3

For optimum performance, protective coatings shall be applied on pore / defect free concrete surfaces. If necessary, apply a levelling layer (e.g., Sika® MonoTop®-3020, Sikagard®-720 EpoCem®, Sikagard®-545 W Elastofill, etc.) to smooth the surface and cover any defects. Refer to relevant Product Data Sheet(s) and / or Method Statement(s) for pore sealer and levelling mortar / coating applications.

For cement-based pore sealer or levelling compounds, allow a curing time of at least 4 days before coating (except when using Sikagard®-720 EpoCem®, then the coating can be applied within approximately 24 hours - refer to Product Data Sheet for more information).

6.1.2 COMBINED SYSTEM WITH HYDROPHOBIC IMPREGNATION PRIMER

If concrete levelling is not possible as preparation for a rigid coating system (e.g., access difficulties, costs, etc.), a hydrophobic impregnation can be used as a primer underneath the coating to avoid localised flaking or peeling. This will also prevent penetration of deleterious elements in areas of localised coating weaknesses.

To improve the aesthetic appearance and reduce patchiness when using a transparent or light-coloured coating (e.g. Sikagard®-680 S Betoncolor Clear), a hydrophobic impregnation can also be used as a primer on the concrete substrate.

Refer to the Hydrophobic Impregnation Method Statement for more details regarding the application procedure.

6.2 FOR CONCRETE SURFACE WITH AN EXISTING COATING

Before application work starts the existing coating shall be checked, and if necessary tested (preliminary study), for compatibility with the new coating.

6.2.1 NATURE OF THE EXISTING COATING

Before selecting the type of coating to be used, the nature of the existing coating(s) must be established. If no documents exist, the nature of the old coating can be determined with the appropriate test method (refer to Section 6.2.2.2).

Thickness of Existing Coating*:	New Coating Suitable For:			
	Microcracking	Cracks ≤ 0.5mm	Cracks ≤ 1mm	Cracks ≤ 2mm
≤ 300 µm	Preliminary study	Preliminary study	Preliminary study	Preliminary study
> 300 µm	Preliminary study	Coating removal	Coating removal	Coating removal

* The thickness of the coating shall be measured following the relevant standard (e.g., EN 3900-CS-5B or EN ISO 2815) using dry film thickness tools such as Elcometer 121/3.

Existing Coating Type:	New Coating Type:			
	Lime-Based	Silicate-Based	Organic Water-Based	Organic Solvent-Based
Lime-Based	Compatible	Compatible	Compatible	Compatible
Silicate-Based	Removal	Compatible	Compatible	Compatible
Organic Water-Based	Removal	Removal*	Compatible**	Removal
Organic Solvent-Based	Removal	Removal*	Compatible**	Compatible**

* Depending on the age of the existing organic coating and the level of its deterioration, application of a silicate-based material might be possible. Preliminary tests are required to determine if the existing well adhering organic coating needs to be removed or not.

** According to the nature of the carrier (water or solvent) of the existing coating, a different primer might need to be used - refer to the specific information provided in the relevant Product Data Sheet.

6.2.2 PRELIMINARY STUDY

6.2.2.1 Aspect / Visual Inspection

The coating shall not show any signs of deterioration (e.g., chalkiness, delamination, peeling, etc.).

6.2.2.2 Determining the Nature of the Existing Coating

The type of carrier of the existing coating can be determined by rubbing the coating surface thoroughly with cotton wool saturated with Thinner C.

If, after rubbing, the surface presents some swelling or softening, it can be assumed that the existing coating was a water-based emulsion. If the surface does not present any swelling or softening, the coating is most probably solvent-based.

If in any doubt, take some representative samples and send them to an independent laboratory to determine the nature of the existing coating.

6.2.2.3 Dry Cross-Cut Test

This test shall be carried out in accordance with EN ISO 2409.

Tools such as Elcometer 121/3 shall be used, and the appropriate cutting knife used in relation to the coating thickness.

At least 2 cross-cut tests need to be performed for each zone to be assessed.

The results shall be interpreted as follows (also refer to the Table at the end of the Method Statement):

- ☺ Good for GT 0, 1 or 2
- 😐 Doubtful for GT 3 or test difficult to be performed
- ☹ Bad for GT 4 or 5

6.2.2.4 Bonding Test

This test shall be carried out in accordance with EN 1542.

At least 5 pull-off determinations shall be performed per zone.

Results are considered positive if:

- ☺ The bonding strength average is superior or equal to 0,5 MPa (0,7 MPa for rigid coating) in case of cohesive break in the substrate.
- ☺ The bonding strength average is superior or equal to 0,8 MPa (1,0 MPa for rigid coating) in case of adhesive break of the coating.

Result is considered negative if:

- ☹ The bonding strength average does not comply to the above.

6.2.2.5 Water Sensitivity

The test shall be carried out on the face of the structure which is most exposed to weathering.

Method: Wet down the coating with a sponge saturated with clean water for at least 30 minutes. Let the surface dry for 10 minutes and carry out a visual and manual examination.

Result is considered positive if:

- ☺ No visual alteration (e.g., swelling, softening, etc.) is observed.

Result is considered negative if:

- ☹ Any alteration due to the water action (e.g., swelling, softening, etc.) is observed.

6.2.2.6 Wet Cross-Cut Test

The test shall be carried out in accordance with EN ISO 2409 on the face of the structure which is most exposed to the weathering.

Surface preparation: Wet down the coating with a sponge saturated with clean water for at least 30 minutes. Let the surface dry for 10 minutes before proceeding with the cross-cut test.

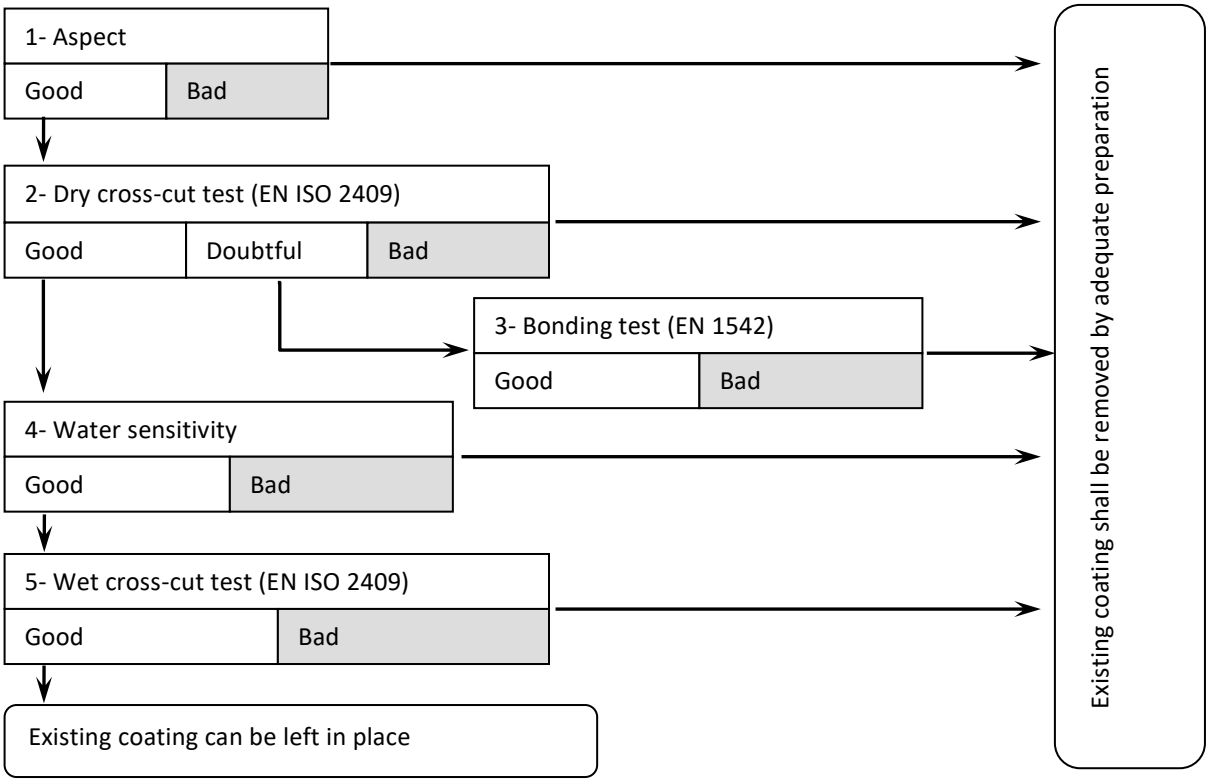
Tools such as Elcometer 121/3 shall be used, and the appropriate cutting knife used in relation to the coating thickness.

At least 2 cross-cut tests need to be performed for each zone to be assessed.

The results are interpreted as follows:

- ☺ Good for GT 0, 1, or 2
- ☹ Bad for GT 3, 4 or 5

6.2.3 FLOW CHART OF THE PROCEDURE



Record the results of this preliminary study properly – refer to Section 8 for an example of a suitable Site QC Record Form.

6.2.4 SURFACE PREPARATION / PRIMING

Once preliminary study tests are confirmed to be positive, the existing coating surface shall be thoroughly washed using steam cleaning to remove any traces of pollution.

If water-based coating (e.g., **Sikagard®-5500, Sikagard®-550 W Elastic** or **Sikagard®-675 W GB ElastoColor**) is to be applied, the primer to be used will depend on the type of the existing well adhering coating:

- For an existing water-based coating, **Sikagard®-552 W Aquaprimer** shall be used.
- For an existing solvent-based coating, **Sikagard®-551 S Elastic Primer** shall be used.
- If the type of coating is not known, a pull-off test shall be carried out on the existing coating to determine a suitable primer. Wait at least 2 weeks after the application test, prior to conduct the adhesion test as per EN 1542. An average value of 0.8 MPa is required.
- If a solvent-based coating (e.g., **Sikagard®-680 S Betoncolor**) is to be applied, normally, no primer is required.

6.2.5 CORRECTIVE ACTION

If the preliminary study determines the existing coating shall be removed, refer to Section 5.1 (Surface Preparation Without an Existing Coating).

7 APPLICATION

7.1 BEFORE APPLICATION

- Working space shall be clean and tidy with no obstructions.
- Record the relative humidity, substrate and ambient temperature.
- Do not apply the protective coating if substrate temperature is at dew point. Only apply protective coatings when the temperature is +3°C above dew point.
- External applications shall be adequately protected. Do not apply protective coatings in windy or rainy conditions, or if there is a risk of frost within 24 hours.
- Refer to specific information for each indicated product in the relevant Product Data Sheet.
- Substrate surface shall be surfaced dry (e.g., <6 % moisture).
- Application shall not be performed during rising temperature due to risk of volume expansion of entrapped humidity in the voids.

7.2 PRIMING SUBSTRATE

The primer to be used for a specific coating and substrate porosity is shown in the Table below:

Coating Product	Type of Concrete Substrate and Primer to be Used		
	Normal Porosity	High Porosity	Low Porosity
Sikagard®-5500	Sikagard®-552 W Aquaprimer	Sikagard®-551 S Elastic Primer	Sikagard®-551 S Elastic Primer
Sikagard®-550 W Elastic	Sikagard®-552 W Aquaprimer	Sikagard®-551 S Elastic Primer	Sikagard®-551 S Elastic Primer
Sikagard®-545 W Elastofill	Sikagard®-552 W Aquaprimer	Sikagard®-551 S Elastic Primer	Sikagard®-551 S Elastic Primer
Sikagard®-675 W GB ElastoColor	Sikagard®-675 W GB ElastoColor + 15 % water	Sikagard®-552 W Aquaprimer	Sikagard®-551 S Elastic Primer
Sikagard®-680 S Betoncolor	No primer	Add on 50 % clear glaze grade	No primer

7.3 MIXING

If a coloured coating is required, further mixing of the colouration material is necessary to re-disperse all the pigments. Consult the relevant Product Data Sheet to see if any dilution for priming is allowed or required.

7.4 CONSUMPTION

Consult the relevant Product Data Sheet for consumption information.

7.5 APPLICATION METHOD

7.5.1 PROTECTIVE COATING

After opening the pail, mix the coating to prevent any potential decanting of the pigment or any other ingredients before application.

For **large scale** applications, non-filled protective coatings (e.g., Sikagard® primers, Sikagard®-680 S Betoncolor, Sikagard®-5500, Sikagard®-550 W Elastic, Sikagard®-675 W GB ElastoColor) can be applied with airless spray.

Typical setting of the airless machine is subject to local testing and experience, however as a guide:

Pressure:	100 to 150 bars
Nozzle:	0.23 (0.009”) to 0.68 mm (0.027”)
Filter:	30 to 100 mesh
Spray Angle:	50 to 80°
Hose Diameter:	6 mm

When working with airless spray, attention is drawn to the cleanness of the filter, as this might cause blockage of the pump.

For **small scale** applications, protective coatings can be applied with a clean, long hair roller or brushes.

7.5.2 PORE SEALER

As a pore filler, Sikagard®-545 W Elastofill can be applied using either a professional brush or with a flat trowel, working well the product in the concrete pores.

7.6 CURING

Protective coatings do not require any special curing but must be protected from rain.

Product	Minimum Time Before Rain
Sikagard®-5500	~ 6 hours at 20°C
Sikagard®-550 W Elastic	~ 4 hours at 20°C
Sikagard®-545 W Elastofill	~ 6 hours at 20°C
Sikagard®-675 W GB ElastoColor	~ 2 hours at 20°C
Sikagard®-680 S Betoncolor	~ 1 hour at 20°C

7.7 WAITING TIME BETWEEN COATS

Each product requires a specific time between coats to allow the volatile compounds of the previous coating to be fully vaporised, and the 1st coat to fully dry.

In the Tables below, the waiting time is given for each given product:

Sikagard®-675 W GB ElastoColor:

1st Coat	Waiting Time	Subsequent Coat
Sikagard®-552 W Aquaprimer	≥5 hours	Sikagard®-675 W GB ElastoColor
Sikagard®-551 S Elastic Primer	≥18 hours	Sikagard®-675 W GB ElastoColor
Sikagard® Hydrophobic Impregnation	≥5 hours	Sikagard®-675 W GB ElastoColor
Sikagard®-675 W GB ElastoColor	≥1 hour	Sikagard®-675 W GB ElastoColor

Sikagard®-5500:

1st Coat	Waiting Time	Subsequent Coat
Sikagard®-552 W Aquaprimer	≥5 hours	Sikagard®-5500
Sikagard®-551 S Elastic Primer	≥18 hours	Sikagard®-5500
Sikagard®-5500	≥8 hours ≥12 hours	Sikagard®-5500 (normal consumption) Sikagard®-5500 (high consumption)

Sikagard®-550 W Elastic:

1st Coat	Waiting Time	Subsequent Coat
Sikagard®-552 W Aquaprimer	≥5 hours	Sikagard®-550 W Elastic
Sikagard®-551 S Elastic Primer	≥18 hours	Sikagard®-550 W Elastic
Sikagard®-550 W Elastic	≥8 hours	Sikagard®-550 W Elastic

Sikagard®-545 W Elastofill (as a Pore Filler / Sealer):

1st Coat	Waiting Time	Subsequent Coat
Sikagard®-552 W Aquaprimer	≥5 hours min.	Sikagard®-545 W Elastofill
Sikagard®-551 S Elastic Primer	≥18 hours min.	Sikagard®-545 W Elastofill
Sikagard®-545 W Elastofill	≥10 hours min.	Sikagard®-5500 / Sikagard®-550 W Elastic

Sikagard®-680 S Betoncolor:

1st Coat	Waiting Time	Subsequent Coat
Sikagard®-680 S BetonColor	≥5 hours min.	Sikagard®-680 S Betoncolor
Sikagard® Hydrophobic Impregnation	≥5 hours min.	Sikagard®-680 S Betoncolor

Note: When application is on an existing coating, waiting time prior to overcoat the primer needs to be doubled.

Note: A refreshing coat of Sikagard® coatings can be applied without priming if the existing coat has been thoroughly cleaned.

Note: Waiting times between primer and subsequent coats are given as the minimum time to wait. There is actually no maximum time, providing the substrate after priming remains free of dust and pollution. If contamination has happened (e.g., due to excessively long times between priming and coating), then a thorough cleaning is required prior to coating application.

7.8 APPLICATION LIMITS

Do not apply when there is expected rain and when the following conditions are not met:

Product	Concrete Age	Relative Humidity	Substrate Temperature	Dew Point
Sikagard®-5500	>28 days	<80 %	>8°C	3°C above
Sikagard®-550 W Elastic	>28 days	<80 %	>8°C	3°C above
Sikagard®-545 W Elastofill	>28 days	<80 %	>8°C	3°C above
Sikagard®-675 W GB ElastoColor	>28 days	<80 %	>8°C	3°C above

Sikagard®-680 S Betoncolor	>28 days	<85 %	>5°C	3°C above

8 INSPECTION, SAMPLING, QUALITY CONTROL

The information provided in this Section follows the recommendations of EN 1504-10 Annex A and Technical Guideline ICRI No. 03732 – 2002. As part of established 'Good Practice', the applicator shall also provide Site QC Reports containing the following recommended site record details.

An example of a QC Site Record Form is provided on the next two pages.

SITE QC RECORD

Sikagard® Protective Coating[1]

SURFACE PREPARATION – NO COATING

Location	Date	Tools used	Surface profile achieved (CSP 1, CSP 2 or CSP 3)

SURFACE PREPARATION – WITH COATING

Location	Date	Nature of coating	Dry cross cut test	Bonding test	Water sensitivity test	Wet cross cut test

	Installation Contractor	Installation Overseer	Client Representative
Name			
Signature			
Date			

[1] Kindly indicates the product name

INSTALLATION RECORD

Project Name: Consultant:

Applicator:

Date	Location & surface area (in m^2)	Weather conditions (Temp., RH%, etc.)	Batch number	Presence of cracks (average width)	Consumption per coat (in g/m^2)	Wet film thickness (in µm)

PERFORMANCE TESTING

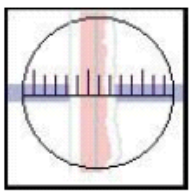
Location	Dry Film Thickness	Cross cut	Bonding strength in MPa

	Installation Contractor	Installation Overseer	Client Representative
Name			
Signature			
Date			

8.1 BEFORE AND AFTER THE PREPARATION WORKS

Characteristic	References	Frequency	Parameters
Concrete Delamination	Hammer Sounding	Once before application	
Cleanliness of Concrete Surface	Visual	After preparation and immediately before application	
Surface Unevenness	Visual	Before application	
Surface Roughness	Visual	After preparation	Refer to Section 5
Surface Humidity	Tramex	Before application	<6 %
Surface Tensile Strength of the Prepared Substrate (if required by the Engineer)	EN 1542	After preparation works	Ideally >1.0 MPa (see Section 6.2.2.4)
Crack Width and Crack Movement (when relevant)	Mechanical, Electrical Gauges or Gypsum Patches		

8.2 BEFORE, DURING AND AFTER THE MATERIAL APPLICATION

Characteristic	References	Frequency	Parameters
Substrate Humidity	Visual, Site Sampling, Lab Analysis, etc.	Before and throughout the application	No damp patches <6 %
Temperature (Ambient and Substrate)		Throughout the application	Within the Product Data Sheet limits
Ambient Humidity		Throughout the application	Within the Product Data Sheet limits
Precipitation		daily	As recorded
Wind		Before and during application	<8 m/s
Batch Number		Each time new material is provided on site	As recorded
Wet Film Thickness	Comb or Wheel Gauge 	Immediately after application while the coating is still fresh	As specified
Dry Film Thickness 	Wedge Cut 	Once to judge the efficiency	As specified

8.3 PERFORMANCE TESTING

The following can be used to check the adequacy of the application:

Characteristic	References	Frequency	Parameters
Dry Film Thickness (DFT)	ISO 2808	Once to judge the efficiency	Within requirement
Cross-cut (DFT <500 µm)	EN ISO 2409-6	Once for each type of surface or member	GT<2 (refer to Table below for detail)
Adhesion of Coating	EN 1542	Once for each type of surface or member	>0.8 MPa (for flexible coating) >1 MPa (for rigid coating)

Cross-Cut Classification as per EN ISO 2409		
Classification	**Description**	**Aspect**
GT 0	Sides of cutting are perfectly smooth: none of the square debonded.	
GT 1	Some partial debonding of the coating at some intersection of the grid that affects approximately 5 % of the grid part.	
GT 2	The coating debonds partially along the cutting edge or at the intersection, and this represents more than 5 %, but less than 15 %, of the grid part.	
GT 3	The coating gets partially or totally debonded in band or large portion at various areas of the grid part. The debonded part represents more than 15 %, but less than 35 %, of the grid part.	
GT 4	As GT 3, but the debonded part represents more than 35 %, but less than 65 %, of the grid part.	
GT 5	Everything that cannot be classified as above.	

9 MAINTENANCE INSTRUCTIONS

The cleaning interval of the concrete coated surfaces with Sikagard® protective coating depends on the environmental conditions. For example, dusty conditions in combination with humid areas near trees will need shorter cleaning intervals. Recommended cleaning interval is once every 10 years, or by request.

Initial cleaning step should be with clean cold water pressure jetting with pressure lower than 80 bar / 1200 psi. Do NOT use rotative water pressure jetting.

If algae remain on the surface, application of a biocide free algae cleaner such as Sikagard®-715 W or Sikagard®-115 should be considered.

If dirt remains on the surface, application of a general-purpose cleaners like Sikagard®-190 All-in-One Cleaner, Sikagard®-119 Cleaner or Sikagard®-120 Cleaner Plus. If efflorescence occurs on the façade, this must be removed by using a non-HCL based cleaner, such as Sikagard®-120 Cleaner Plus.

In general, 1 to 3 minutes reacting time is required for the cleaning products to work and after that, cleaning with clean cold water pressure jetting with pressure lower than 80 bar / 1200 psi. Do NOT use rotative water pressure jetting.

10 LEGAL NOTE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the products suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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