BUILDING
CHEMISTRY
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Method of Statement BC Shield Application

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This method statement provide detailed step by step guide , application procedure , equipment / tools requirement and precautionary measures to be followed in job site for optimum performance

System description

Sl.no	Steps	Key function	BCI Product description
1	Surface preparation	Surface cleaning to begin work	Manual / power tool cleaning
2	Gap filling	Filling joints and cracks with sealant	BC Tec 30S
3	Masking tape	Edge protection	White tapes
4	Scratch coat	Bonding coat / priming	BC Shield
5	Water proofing	Wet area water proofing	BC Shield

Project Preparation

1.1 Project Check

It is invaluable to check the project in advance. The following checklist, although not exhaustive, is a guide the most important points to take in consideration.

Check that the construction and substrate are in good condition.
Check that the roof has adequate falls with 3^0 Minimum.
Check that new concrete has cured for at least 28 days and has a pull off strength≥ 1.5 N/mm2.
Check that the surface is dry and substrate humidity is maximum 6 % without emitting dampness.
Check the ventilation and ensure that during application it is sufficient.
During phase of refurbishment, check that the application on the roof is not disturbing the internalenvironment.
Check that the necessary health and safety equipment e.g. scaffolding, ladder etc. is available onsite.
Check the measurement of the project.
Make a programme for the whole project. Check staff (where necessary) are available when required, all Sikalastic®-560 products including tools/equipment as well as the protective health and safety equipment are available at and for the required period of time.
Check weather conditions system requires conditions as below.
Substrate Temperature + 8 °C min. / + 35 °C max.
Ambient Temperature + 8 °C min. / +35 °C max

1.2 Determination Of Dew Point

It is important to pay close attention to avoiding dew point conditions. The application temperature must exceedthe dew point by at least 3 °C. The dew point can be defined with a point device or manually by the dew point chart as following explained.

1. Measure air temperature in °C
2. Measure atmospheric humidity in %
3. Measure substrate temperature in °C
4. Determine dew point temperature using dew point chart or Sika slide rule guide
5. Add 3 °C to dew point temperature
6. Verify that substrate temperature is at least 3 °C higher than dew point

Example: Air temperature: 20 °C Atmospheric humidity: 60% Substrate temperature: 16 °CDetermined dew point temperature with dew point chart: 12.0 add 3 °C: 15.0 °C.
Verify: Is 16 °C greater than 15.0 °C? Decision: Installation is not permissible.Dew Point Chart

Application

1.3 Surface Preparation

Generally speaking all surfaces must be clean dry and sound the following section suggests methods of dealingwith most common substrates.

Cementitious substrates

New concrete should be cured for at least 28 days and should have a pull off strength ≥1.5 N/mm2. Inspect the concrete, including up-stands, all areas should be hammer tested. Concrete must be suitably finished, preferably by wood float or steel pan. A power float finish is acceptable where the surface is prepared to avoid laitance (a tamped finish is not acceptable). The surface finish must be uniform and free from defects such as laitance, voids or honeycombing.
Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed.
Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriateproducts from BCI range of materials. High spots must be removed by e.g. grinding.
Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior toany coating work. Any requirement for priming must also be considered. Installing the coating either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coat in the late afternoon or evening.

Brick and stone

Mortar joints must be sound and preferably flush pointed. Make good any missing mortar and power wash – allowto dry.

Ceramic tiles

Ensure all tiles are sound and securely fastened, replacing obviously broken or missing sections. Tiles need a good adhesion to the substrate otherwise they need to be removed. Powers wash clean thoroughly and allow drying. Test adhesion to surface, glazed tiles must be abraded prior to priming. Degrease with detergent or proprietary degreasing agent. Ensure tiles are not situated above high levels of moisture.

Asphalt

Asphalt contains volatiles which can cause bleeding and slight non-detrimental staining. The asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish prior to any coating works being carried out. Power wash. All major cracks should be sealed.

1.4 Curing TIME

Times are approximate and will be affected by changing ambient conditions particularly temperature and relativehumidity.

Ambient Conditions	Min. waiting time Overcoating	Rain Resistant[2]	Full cure
+20°C/50% r.h	~ 24 hours	~ 8 hours	~ 4 days
+30°C/50% r.h	~ 12 hours	~ 4 hours	~ 2 days

2 Be aware that impact of heavy rain or rain showers can physically mark or damage the still liquid membrane.

5 EQUIPMENT

Preparation equipment appropriate to the

surface.**Light blasting equipment –**

professional use only. Grinders – do not

use on bitumen

Use appropriate equipment for the project – pneumatic grinders may be required in somelocations.

Wire brushes – hand or mechanical

High pressure water jet

Very common method of preparation – works very well – **caution** – adding water to surfacemay enter building so sealing may be necessary and surface will also need to be allowed to dry out before coating commences.

Pressure feed roller

Can be used in combination with spray pump for rapid roller installations.

Rollers

Small rollers ideal for detailing work.

Medium pile solvent resistant rollers are ideal for most surfaces – use double arm rollers to get even application of coating and even pressure ifembedding fleece.

Larger deck roller extension pole – enables a longer reach.

Brushes

Various sizes of brush are useful for detail work

Use any equipment only as instructed by supplier or manufacturer**.**

Installation

Preparation

Surface must be clean, dry, hard and free from dirt,loose particles . wax . sealers , loose particles . wax , sealers , cusring compounds , grease , paint efflorescence and any foreign materials that will inhibit adhesion
Walls and floors must be structurally sound, free of movement and dimensionally stable

Concrete floors must be fully cured (28 days) and have afine broom finish
Sprinkle water on the substrate in various areas looking for penetration
If waterdroplet or beading of water is noticed then surface contaminates are present that will cause loss of adhesion and must be removed.
Smooth troweled surfaces should be scarified to assure bond
Inspect surfaces that will receive the tile and the tools used to install it

Step 3 - Fill in the gaps with silicone

After the primer is dry, the next step is to fill any gaps (between floor and wall, around the vanity, near the shower, at the shower base, etc.) with silicone. First remove any old silicone with a paint scraper, Stanley knife, or something similar, then apply the new silicone. Wait approximately 24 hours for it to dry, sealing any potential gaps.

Step 4 - Use masking tape around walls

To ensure your bathroom waterproofing is completed with a straight edge, apply masking tape as you would when painting.

No mixing is required. Gently stir to re-blend if needed, prior to application

Again, this can be applied with a roller or brush. Starting at the back corner for ease of access, apply around the wall up to the height of your masking tape and then where the wall and floor meet.

Step 6 - Add the waterproof membrane
A waterproof membrane should then be added to the wall and the cracks in the floor. First cut the product into appropriate lengths and place it into position. Then paint over it with the waterproofing agent to stick it down. Ensure you paint over it

Step 7 - Apply the waterproofing agent to the rest of the floor
Wait for the membrane, which is now covered in the waterproofing agent to dry. Then, the next step is to cover the entire floor in waterproofing agent. This is just the first coat. Do you need to do another coat? Yes.

Precautionary notes

Apply Waterproofing Membrane only to surfaces that are frost free and above 40°F (4°C) for 72 hours.
Do not apply under wet conditions or where these conditions are likely to occur before the membrane has fully dried.

Crack Isolation over concrete

Brush, roll to achieve a total minimum thickness of 30 wet mil thickness. Check the mil thickness periodically during the application with a mil gauge to assure that the thickness is minimum 30 wet mils.
Apply each coat at right angles to each other to assure any pin holes are completely filled.
Drying time will take approximately30-45 mins but may vary due to the environmental conditions Additional coats of Waterproofing & Crack Isolation Membrane can be applied if necessary..
Do not bridge over existing expansion or control joints.

Existing Cracks

1. Using a paint brush apply a liberal amount of the Waterproofing & Crack Isolation Membrane over the cracked area at least 6 in. (15 cm) on each side of the crack.

Step 8 - Apply a second coat

The first coat will take about 24 hours to dry. Once this has been done, you are ready to apply a second coat, which should be applied in a different direction to the first (i.e. diagonally). This will take at least one more day to dry.

Then, it is important to allow the waterproofing to fully cure before tiling or doing any more work in the bathroom. Depending on the climate, this can take up to five days.

Required total minimum thickness:

a. General Waterproofing - 30 wet mils (16 mil dry, nominal)
Wet area water proofing -30 wet mils (16 mil dry, nominal)
b. Steam Rooms - 57 wet mils (30 mil dry, nominal)
Allow Waterproofing to cure 12 hours, or once completely dried throughout, prior to flood test
Additional coats of Waterproofing & Crack Isolation Membrane can be applied if necessary

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Clean up

Clean tools and hands with warm soapy water immediately after use and before material dries.

Limitations

Do not apply when air or substrate temperature is below 40°F (4°C) or above 100°F (38°C) within 24 hours of application.
Do not apply fewer than two coats to ensure uniform and minimum thickness.
Do not bridge over existing expansion or control joints.

Do not use as a primary roofing membrane over occupied space.
Do not use where exposed to negative hydrostatic pressure.
Do not apply on substrates that are frozen or contain frost.
Do not use in a steam room unless the dry film is >30 mil thick (57 mil wet).
Initial set time is 1-1½ hours at 70°F (21°C)
Note: Unprotected membrane should not be directly exposed to sun or inclement weather prior to the installation of the wear surface materials

6.Disposal

Disposal of emptied tins of BC Shield
Where residual material has fully cured the material poses no threat to health, safety or the environment.Therefore containers coated with fully cured residues do not need special disposal considerations.
Where residual material has not cured or a skin has formed on the surface this must be disposed as hazardouswaste according to local regulation, any markings denoting hazards must remain.
For more detailed information pls. refer to the MSDS.

6 Safety Measures On Site

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Personal Protection:

The following protective equipment is essential for anyone working with BC products.



In addition to protective clothing it is also recommended to use a barrier cream on the skin. The use of a barrier cream is more useful and effective than often reputed, they are inexpensive, convenient, and protect well if they are not frequently flushed with solvents. However, barrier creams are only a supplement to and not a replacementfor protective gloves, so always wear gloves. Always ensure there is no contamination inside gloves before reusing them.

Wash your exposed skin occasionally during the workday and immediately if any Liquid Applied Membrane product gets on it. Avoid using solvents since they can help Liquid Applied Membrane material penetrate in to the skin and solvents themselves are aggressive and harmful to the skin. If water is no more available at any time or shorten, then clean the contamination with sand instead. Certain hand cleaners also work without harmful effects. Citrus skin cleaners, for example, are effective and mild. Soap and water takes time, but also eventually works for small areas.

Avoiding skin contact by keeping tools and equipment clean is one of the best ways to protect oneself.

Despite safety precautions, with any instances of skin contact rinse immediately with clean water and use warm water and soap to thoroughly clean the skin. A good skin cleanerT.

No ® applications should ever proceed without sufficient water being adjacent andavailable for eye washing.

If adequate clean water is not provided then the project should not commence, no matter what the urgency. If a professional eyewash kit is not available, then at the very minimum one quart ofclean water must be present. The water can be in a pail, plastic jug or via a hosepipe.

Safety glasses or other eye protection obviously help those doing the work but they can also create a false sense of security. Do not take risks with health!

In the event of any spillage or contact into the eyes, always seek medical advice immediately after rinsing andcleaning the eyes with the clean water.

Ensure sufficient ventilation during application in closed or confined spaces. Dependent on local regulationsrespiratory masks may be required. Please observe all relevant local regulations.

Hard hats, safety shoes and ear protection are also generally recommended on construction sites.

7 LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of BCI products, are given in good faith based on BCI's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with BCI 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. BCI reserves the right to change the properties of its products. The proprietary rights of third partiesmust 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.