

Method of Statement BC Roof Coat Application



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Table Of Contents

1	System Description	3
1.1	Characteristics / Advantages	3
1.2	References	3
2	System information	4
2.1	Products	4
2.2	System Build - Up	5
3	Pre-Project Preparation	6
3.1	Project check	6
3.2	Determination of dew point	8
4	Application	9
4.1	Surface Preparation / Primer	9
4.2	Application of BC Wet guard	11
4.3	Joint details for Wet area water proofing	
5	Equipment	15
6	Disposal	17
7	Limitations	17
8	Safety Measures on Site	18
9		

Pre-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° Minimum.
Check that new concrete has cured for at least 28 days and has a pull off strength ≥ 1.5 N/mm ² .
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 Internal environment.
Check that the necessary health and safety equipment e.g. scaffolding, ladder etc. is available onsite.
Check the measurement of the project.
Make a programmed for the whole project. Check staff (where necessary) are available when required, all 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 exceed the 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 °Determined 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 dealing with 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 appropriate products 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 to any 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 – allow to 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. Power 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 relative humidity.

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 some locations.



Wire brushes – hand or mechanical



High pressure water jet

Very common method of preparation works very well **caution** adding water to surface may 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 if embedding 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 , curing 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 affine broom finish
Sprinkle water on the substrate in various areas looking for penetration
If water droplet 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

Mixing

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

Application

Apply Waterproofing & Crack Isolation 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 approximately 30-45 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.

Required total minimum thickness:

a. General Waterproofing - 30 wet mils (16 mil dry, nominal)
b. Steam Rooms - 57 wet mils (30 mil dry, nominal)
Allow Waterproofing & Crack Isolation Membrane 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

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 Roof Coat
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 hazardous waste 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 replacement for 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 cleaner.

No[®] applications should ever proceed without sufficient water being adjacent and available 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 of clean 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 and cleaning the eyes with the clean water.



Ensure sufficient ventilation during application in closed or confined spaces. Dependent on local regulations respiratory 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 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.