BUILDING
CHEMISTRY
INDUSTRY

Method statement for of BCI Cementitious repair mortar BC Repair 100

This method statement describes the step by step procedure for preparing and covering subfloors with BC Repair 100

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General Project Requirements

It is the responsibility of the contractor to ensure that all requirements indicated in this document and the current

Product Data Sheets (PDS's) are met, which include but are not limited to:

Understanding of the end-user performance requirements for each specific area;
Suitable build-up for each of the areas;
Correct determination of the area to be treated;
Substrate evaluation:
Floor construction, layer thickness and materials, including isolation layers
Joint layout
Cohesive strength, cracks
Surface porosity / absorption
Presence of moisture
Contamination
Substrate preparation:
Surface texture
Roughness or profile for increase in product consumption over normal coverage rates
Health and safety equipment;
Adequate application tools and mixing equipment.

Product description

1-component, polymer modified, cementitious, self-leveling underlayment

BC Repair 100

Water Supply

Verify the availability of water supply (distance and available amount), whether for manual or pump application. The water must be clear, clean and potable. It is prohibited to use contaminated, salt or waste water
For manual application the required amount of water is defined in current PDS, plus the amount of water necessary for cleaning of tools
For pumping applications, depending on the machines, the water amount must be uninterrupted.

Power Supply

Verify the availability and distance of electrical power to drive the hand held mixer or any heavy duty machinery

Material Storage / Access / Transportation

Keep material in original, unopened and undamaged sealed packaging, in dry conditions.

Labor Protection

Wear proper safety equipment (i.e. gloves, eye goggles, safety boots and protective clothes) during application. When kneeling, use protective knee-pads.
To avoid dusting when opening bags, place the mixing station in an open area, or set up a dust extraction system.
Ensure sufficient ventilation during application.
The dust extraction system will protect the workmen responsible for the mixing(manually or machine) and prevent dust from falling onto the prepared areas and preventing or reducing the bonding of the screed to the substrate.

Cleaning, Recycling and Disposal

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most current Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related information.

Store dry at 41° - 86°F (5° - 30°C).
Condition material to 65° - 75°F (18° - 24°C) before using.
If damp, discard material.

Substrate Evaluation

Substrate requirements differ according to floor loading. For industrial floors the typical minimum requirements for substrate strength are: Compressive > 3,000 psi (20.7 MPa), Tensile Strength above 200 psi (1.4 MPa
The surface must be clean, dry or Saturated Surface Dry (SSD) and free of all contaminants, (e.g. dirt, oils, grease, coatings and surface treatments, etc.).

Surface Treatment

Substrate preparation by mechanical means such as shot blasting or scarifying must always be done to ensure sufficient surface profile and roughness
Concrete substrates must be prepared mechanically using abrasive blast cleaning or grinding or milling machine equipment to remove cement laitance and achieve an open textured surface relevant to Concrete Surface Profile (CSP) range from 1 to 10.

Weak concrete must be removed, whether manually or mechanically and surface defects such as blow holes and voids fully exposed
Check also the floor perimeter and fill in all holes, cracks, joints in order to avoid screed passing through it.
Old cutback adhesive can contain asbestos dangerous to health so do not grind, sand or blast

Cracks and Joints

Surface defects like cracks, must be repaired properly, before priming to avoid the risk of screed material flowing into them and producing air bubbles, or reflective cracks in the surface of the substrate subject to movement.
Any expansion joints (or joints where movement is expected) must be honored and reflected on the surface of the screed.
It is always advisable to reflect any existing joints in the same width, direction and location on the surface of the finish screed

Material estimation

Measure the total area to be leveled in square feet (square meters). Determine the thickness necessary to achieve desired level and performance requirements
Calculate the amount of material necessary: The coverage indicated in the current PDS excludes waste and practical considerations such as surface roughness.
Confirm that the required slopes are compatible with those of the concrete substrate and the materials flow properties. Take any remedial action necessary prior to starting the substrate preparation

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Equipment For Application

Tools

Each product requires different kind of equipment. Below is a non-exhaustive list of tools that will be needed. Proper safety equipment is required at all times during the application (i.e. gloves, eye goggles, safety boots and protective clothes, etc.).

Grinder (or other floor preparation equipment)
Vacuum (or other means of removing debris prior to application)
Extension cord(s)
Electronic Impedance Concrete Moisture Meter (e.g. Tramex CME)
Rags
Crack chaser
Self-leveling cement
Masking tapes, foam barriers
Measuring buckets
Mixing barrel or drum
High Speed Drill (min. 650 rpm)
Egg beater missing paddle
Rubber Spiked Shoes
Pump equipment
Spreader/Screed box
Steel Smoother
Plain hand trowel

Environmental Requirements

Temperature

At high ambient and substrate temperatures, the setting speed increases and reduces the working time or time available to finish the surface.
At low ambient and surface temperatures, the setting speed decreases and working times are consequently increased.

Humidity

At high relative humidity levels, the mixing water is not lost to evaporation, reducing therisk of shrinkage cracks.
At low relative humidity levels, the risk of water loss through evaporation is increased and
consequently, the risk of shrinkage crack is higher.
Beware of condensation! The substrate and uncured floor must be at least 5°F above dew point to reduce the risk of condensation or “blooming” on the underlayment finish

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Cementitious Underlayements

In case of unevenness existing concrete substrates, it is recommended to repair the surface with cementitious mortar BC Repair 100

Mixing and application

Add the dry powder to the correct amount of clean water.
Ensure the powder is free of lumps.
Measure the necessary amount of clean water per bag.
Then add the powder to the water mixing.
Never add the water to the powder or add it in stages, as this alters the properties of the product.
Mix thoroughly for a minimum of 3 minutes. Use a high speed drill (min. 650 rpm) and an egg beater paddle
After mixing ensure that self-leveling is free from segregation and lumps.
Pour the mixed material onto the primed surface and apply by steel smoother or adjustable pin rake to the required thickness.
Do not roll the application excessively (for too long), as this may create an unsightly appearance
Keep a continuous supply of mixed material flowing and place efficiently to maintain a “wet edge” which will reduce the differences between mixes where the material has already started to dry and set.
Protect curing underlayment from impact, direct light, heat sources and moisture

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