Stampable Overlay

Bonway's Stampable Overlay is a pre-blended polymer modified, non-shrink cementitious thin applied overlay for resurfacing concrete flatwork. It is available in a gray base that can accept integral pigments or dust on Hardener for color modification during application, or it can be modified after placement and cure with either acid or acrylic stains for desired effects. Stampable Overlay contains finely dispersed exclusive polypropylene fibers for increased tensile and flexural strengths and improved durability, as well as added flexibilizers, plasticizers and finishing agents that help minimize efflorescence formation and freeze thaw related spalling and cracking surface degradation. Typical applications include interior floors and building entrances, patios, pool decks, sidewalks, driveways and related flatwork.

COMPOSITION

Portland based cement, selected aggregates, acrylic copolymers and proprietary chemical additives. This product contains no calcium chloride or added chlorides that contribute to reinforcement steel corrosion or efflorescence concerns.

TECHNICAL DATA

Working & Performance Properties at 70º F Approximate:

Initial Set : 1.0 hours Final Set : 3.0 hours

Coverage per 50 lb. bag:
16.5 sq. ft. at 3/8 inch application / 22 sq. ft. at 1/4 inch

Tests run at 19.5% water to powder ratio = 4.70 quarts water / 50 lb bag

Compressive Strength per ASTMC-109:

1 day: 1210 psi (8.3 Mpa) 7 days: 3520 psi (24.2 Mpa)
3 days: 2550 psi (17.6 Mpa) 28 days: 4400 psi (30.3 Mpa)

Flexural Strrength per ASTMC-78:

7 days: 870 psi (6.0 Mpa) 28 days: 1520 psi (10.5 Mpa)

SURFACE PREPERATION

Proper surface preparation of the concrete substrate is critical for successful application of the overlay.. The substrate must be in a structurally sound condition, free of gaping cracks (wider than hairline), and free of oil, grease, dirt and all other surface contaminates that would interfere with adhesion of the product. The ideal substrate to be covered should have some absorptive porosity or texture (surface profile), and should not repel water when applied. All cracks, spalls, or holes need to be patched or repaired prior to application. This type of cleaned, profiled surface can be obtained by use of pressure washing, sand blasting, or blast tracking (steel shot).

Joints: All expansion joints within the existing concrete need to be kept open and **should not be permanently covered** by the overlay. These joints can be marked during application and are usually incorporated into the desired end pattern or texture of choice. Placement of the Overlay over expansion joints or other moving cracks and joints that are not repaired beforehand or

SURFACE PREPERATION (Cont.)

allowed to expand can telescope or transfer through to the overlay surface causing additional cracking or possible delamination of the material. Non moving cracks or spalls can be repaired with suitable injection epoxy, taking care to keep the epoxy inside the crack and not overfilled onto the concrete surface. Once the stampable overlay is installed, a control joint can be sawed through the substrate at a minimum of 1/3 the depth to allow for continued movement. This joint should be sawed as close as possible to the original crack.

Cure Time: Allow 28 day minimum cure time for application to new concrete slabs. When repairing old or cracked concrete, all repair mortars or epoxies have to be allowed proper cure times as well. Allow at least 12 hours for injection epoxy repairs and 3-4 days for cement patching mortars.

Mixing: Accurately measure out the correct water amount for each bag of Overlay and add to a clean mixing bucket. A 50 lb bag (22.6kg) will require 4.5 to 5.0 quarts (4.2-4.7 L) of water to achieve the proper "pancake batter-semi-flowable" consistency, depending upon ambient conditions. Warmer temperatures or lower humidity levels may require use of the higher water level amount. Note that variations or inconsistent measuring in the amount of water added will result in differences in end color and texture. Add any selected pigments or colorants (liquid or powder) per the dosage rate specified by the color manufacturer, taking care to measure identical amounts with each batch to ensure uniformity. Using a mechanical mixer, mix material at low speed until it is fully blended, and a uniform, lump free consistency is obtained.

Application: Pre-dampen the substrate prior to application of the Overlay so that it is uniformly damp, but has no free standing water or puddles. Apply Primer to the surface at a typical rate of 150- 200 square feet per gallon approximately 1-2 hours before application. The Primer will dry to a slightly tacky, clear consistency within 1 hour at 70ºF average conditions. Apply the mixed Overlay from the walls outward at desired thickness by use of an adjustable gauge rake. Once the material is gauge raked to a uniform thickness, the surface can be troweled to a smooth finish typically using a rounded corner fresno. Do not over trowel the material. Allow the Overlay to reach initial set so that the surface is pliable (firm to touch but not sticking to fingers or tools), but do not allow it to reach final set before the surface is stamped and textured. Drying time initial set is typically between 1 hour (+/-) 30 minutes depending on thickness and weather conditions.

Liquid Release Option: Using a hand held sprayer, spray Liquid Release Agent onto the stamping tools as well coating very lightly the surface area to be stamped. Too much release agent applied to the overlay surface may result in air bubbles or mottling inconsistencies in color after stamping. Some end users mix integral color into the release liquid to obtain a lightly antiqued finish upon stamping.

Powder Release: Release Powder can also be used in place of liquid release for increased antique color enhancement effect. Broadcast just

SURFACE PREPERATION (Cont.)
enough release powder so that the surface appears dry and completely covered, avoiding any piles, lumps or streaks. Proceed with standard stamping procedure. Allow the applied surface to "air cure" for a recommended minimum of 24 hours before cleaning and foot traffic, and 48 hours before applying any stains or sealer topcoats to reduce the chance of any blushing or whiting effects.

Cautions: Mix Overlay for approximately 5 minutes. Do not mix more material than can be placed in 20 minutes. The temperature of the mixed material should ideally be between 45º F to 70º F, do not apply below 40ºF or above 90ºF. Use only potable water for mixing. Clean mixing equipment between batches. When mixing Overlay, the water-to-powder ratio is very critical, do not vary the specified water amount or over water. Do not re-temper. Use of any extension aggregates will alter physical properties as listed. Protect from excessive sun, low humidity, rain and wind exposure, as well as temperature extremes that could prevent inadequate curing. High humidity and lower temperatures will slow rate of strength gain. Do not apply if rain is expected within 24 hours of application. Do not apply to frozen, frost filled or hot surfaces. Not to be used on surfaces that are low grade or below grade. Not to be used on surfaces with heavy hydrostatic pressure

Warnings: Contains cement and silica, avoid inhalation of dust. Wear gloves, safety goggles, and OSHA approved dust respirator during mixing and placement. Refer to product S.D.S. (Safety Data Sheet) for additional safety information. Do not take internally. Avoid prolonged contact with skin.

FOR INDUSTRIAL USE ONLY.
KEEP OUT OF REACH OF CHILDREN.

NPCS HMIS SAFETY RATINGS
HEALTH = 2
FLAMMABILITY = 0
REACTIVITY = 0
PROTECTION = E

STORAGE
40ºF to 90ºF

SHELF LIFE
One year properly stored.