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CELCORE THINPATCH ADMIXTURE SPECIFICATION

PART 1: SCOPE

- 1.1 An Approved Celcore Applicator shall furnish all labor, materials and equipment required for the Thinpatch application.
- 1.2 The Thinpatch application shall become an integral part of the deck system.

PART 2: GENERAL

- 2.1 Celcore Thinpatch Admixture is a non-hazardous, non-corrosive cement modifier developed to be used to make repairs or detail Celcore Cellular Insulating Concrete roof decks.
- 2.2 Celcore Thinpatch Admixture is added to high cement factor mixes placed in thin applications.
- 2.3 Celcore Thinpatch Admixture is added to concrete mixtures to prevent rapid drying, powdering, chalking and/or severe cracking as may occur in non-modified mixtures.
- 2.4 Celcore Thinpatch Admixture is added to insure adequate bond to the parent surface and to lower the modulus of elasticity in high cement factor mixtures causing the repair material to be less brittle.
- 2.5 Celcore Thinpatch Admixture serves as a plasticizer allowing reductions in the water to cement ratio of from 10 to 15 percent over non-modified mixtures.
- 2.6 In situations where Celcore Thinpatch is used to cap or repair a cementitious deck, its use should be communicated to the roof membrane manufacturer. Although Celcore Thinpatch has been tested by several roofing manufacturers for bond and uplift resistance, there may be special condition that the roof membrane manufacturer may want to confirm by test or verbally with Celcore Incorporated.

PART 3: MATERIALS

- 3.1 Thinpatch Admixture is produced by Celcore Incorporated of Black Mountain, North Carolina. Containers of Thinpatch Admixture shall be clearly identifiable by labeling. Thinpatch admixture is a free flowing, redispersible powder which shall be kept in dry storage to avoid caking.

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- 3.2 Portland cement used may be of various brands however must be identified as either Types I, IP, II, or III, and labeled as meeting the requirements of ASTM C-150.
- 3.3 Water for mixing shall be clean, fresh, and free from injurious quantities of acid, alkali, salt, oil, organic matter or other impurities. Installation in cold weather may require the use of heated water.
- 3.4 Aggregates, if utilized, may be conventional concrete aggregates [limited however to fines] meeting the requirements of ASTM C-33, perlite lightweight concrete aggregate meeting ASTM C-322, Group 1, or preformed foam for cellular concrete meeting ASTM C-796. The use of vermiculite in not permitted.

PART 4: MIXTURES

- 4.1 Repairs having thicknesses 1/8" [.32 cm] or less:
 - 4.1.1 Thinpatch Admixture modified neat cement slurry mixtures are recommended.
 - 4.1.2 Thinpatch modified neat cement slurry mixture proportions:
 - 4.1.2.1 Portland cement: 94 lbs [42.46 kg]
 - 4.1.2.2 Water: 56 lbs [25.4 kg] or 6.7 gallons [22.36 L]
 - 4.1.2.3 Thinpatch Admixture: 3 lbs [1.36 kg]
 - 4.1.3 After thoroughly mixing the ingredients using a high shear mixing tool, allow the mixture to stand idle for several minutes to allow adequate wetting of the cement. Then re-mix to assure uniform dispersion. Begin application immediately.
- 4.2 Repairs having thickness greater than 1/8" [.32 cm], but less than 3/4" [1.09 cm]:
 - 4.2.1 Thinpatch Admixture modified cement / aggregate mixtures are recommended.
 - 4.2.2 For repairs to a non-nailed decks, use perlite or fine sand aggregate. For repairs to a deck that will be nailed, use perlite concrete aggregate only.
 - 4.2.3 Thinpatch modified cement / aggregate mixture proportions:
 - 4.2.3.1 Use [1] part portland cement to [1 or 2] parts [by volume] of aggregate.
 - 4.2.3.2 Water content shall be sufficient to allow an easy flow for placement.

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- 4.2.3.3 Thinpatch Admixture shall be used at a rate equal to 3 lbs [1.36 kg] per 100 lbs [45.36 kg] of cement.
- 4.2.4 Upon thorough mixing of the ingredients, begin placement immediately.
- 4.3 Repairs having thicknesses greater than 3/4 inches [1.09 cm]:
 - 4.3.1 Thinpatch Admixture modified perlite or cellular concretes are recommended.
 - 4.3.1.1 Perlite concrete mixtures shall consist of 1 part portland cement and 6 parts perlite concrete aggregate.
 - 4.3.1.2 Thinpatch Admixture shall be used at a rate of [6] lbs [2.72 kg] per cubic yard of perlite concrete.
 - 4.3.1.3 Water content shall be sufficient to allow an easy flow for placement.
 - 4.3.2.1 Cellular concrete mixtures shall be proportioned to a minimum 40 lbs/ft³ [64kg/m³] cast density.
 - 4.3.2.2 Thinpatch Admixture shall be used at a rate of [6] lbs [2.72 kg] per cubic yard of cellular concrete.
- 4.3.3 Upon thorough mixing of the ingredients, begin placement immediately.

PART 5: PREPARATION

- 5.1 Before placement of the selected Thinpatch mixture, the surface area shall be thoroughly cleaned of loose debris. The preferred method of deck preparation is sweeping, vacuuming or blowing.
- 5.2 The deck surface may be moistened to receive thin applications particularly in hot weather. A covering of standing water however, is not permitted.
- 5.3 Any portion of the parent deck determined to be un-bonded or otherwise unsound, shall be removed prior to placement.

PART 6: PLACEMENT

- 6.1 Repairs having thicknesses 1/8" [.32 cm] or less:
 - 6.1.1 Thinpatch modified cement slurry may be applied by troweling, squeegee or other method resulting in the desired smoothness of the finished surface.

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- 6.2 With the exception of those repairs having thicknesses of less than 1/8" [.32 cm], screeds should be set when capping to provide a true surface. Smaller repairs may be accomplished by troweling.
- 6.3 The placement crew shall be of sufficient size to handle the batch volume. Placement time for any size batch shall not exceed one hour.
- 6.4 In no case shall batches be re-tempered with water after placement begins. Materials which have exceeded the time limitation or have lost desired work ability shall be discarded.
- 6.5 Protect the repairs from traffic until sufficient set has occurred.

- END OF SECTION -

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