****

**DIAMOND-PLATE**

**Non-Oxidizing, Heavy Duty Metallic Floor Hardener**

***{Note to Specifier: The paragraphs below are meant to be incorporated into Parts 2 and 3 of a standard CSI 3 Part Format specification (normally 03 30 00), the General Structural Notes, or directly onto the plans. They must be carefully reviewed and edited by a qualified design professional to meet the requirements of the project and governing building codes. Coordinate with other specification sections and drawings.}***

***{Note to Specifier: Because the mix design is essential to a successful dry shake application, there must be coordination between the ready mix company and the flatwork contractor. Therefore, specify a pre-concrete conference in Part 1 of the specification. Include topics such as water cement ratio (minimum .45, but .50 is preferable), initial water slump (3-4”), fly ash (none is preferable, but up to 15% is acceptable), placement conditions (placement under roof is preferable), evaporation retarder, curing, etc.}***

PART 2: PRODUCTS

2.\_\_ NON-OXIDIZING, HEAVY DUTY METALLIC DRY SHAKE FLOOR HARDENER

A. Graded, non-oxidizing metallic aggregate in a high strength cementitious binder providing 6 times the abrasion resistance of plain concrete per ASTM C 779.

1. Product:

1. Euclid Chemical Company (The); Diamond-Plate, [www.euclidchemical.com](http://www.euclidchemical.com)
2. Color to be selected by specifier from manufacturer’s standard colors.

***{Note to Specifier: Euclid Chemical strongly recommends that an evaporation retarder be available during all dry shake applications. It will need to be used whenever hot, dry, or windy jobsite conditions cause premature drying of the surface. It will not interfere with bond or penetration of future floor treatments. Therefore, add Eucobar by Euclid Chemical to the concrete specification.}***

***{Note to Specifier: Proper curing of the dry shake slab is essential. If a curing compound will be used, select one from the product data sheet and add it to the concrete specification. If the floor will receive penetrating sealers, adhesives, coatings, paints, stains, or treatments of any kind add Kurez RC-100 removable curing compound by Euclid Chemical, Kurez DR VOX dissipating curing compound by Euclid Chemical, or wet curing for a minimum of 7 days to the concrete specification.}***

***{Note to Specifier: It is required that the concrete have no entrained air and less than 3% entrapped air. Therefore it is recommended that Eucon Air Out admixture by Euclid Chemical, which is an air detrainer, be added to the concrete specification to minimize the air content.}***

2.\_\_ MANUFACTURER

A. Manufacturer shall have ISO 9001 Quality Certification. To ensure compatibility all products shall be from the same manufacturer.

PART 3: EXECUTION

3.\_\_ CONCRETE PLACEMENT

A. Place and consolidate non-air entrained concrete containing air detrainer if required. Maximum air content shall be 3.0%.

B. Hand or mechanically screed concrete.

C. Mix and use evaporation retarder per manufacturer’s written recommendations after concrete placement or after any floating operation as required to prevent surface from drying out prematurely from hot, dry, or windy jobsite conditions whenever evaporation rate exceeds 0.2 pounds/square foot/hour per nomograph in ACI 305.1.

D. Use bullfloat or highway straightedge to flatten surface and remove imperfections taking care to not close the surface of the concrete.

***{Note to Specifier: The specifier should choose one of the following sections}***

**3.\_\_ SINGLE PASS DRY SHAKE APPLICATION**

**A. Dry shake shall be applied at a rate of [1.0 to 3.0] [select application rate] pounds per square foot by calibrated mechanical spreader except small areas not accessible to mechanical spreader may be hand applied.**

**B. After dry shake has completely wetted out from below, float it into concrete using walk behind or ride-on power-trowel with float shoes.**

**C. After dry shake has been worked into concrete and slab has been given time to further “tighten up” begin final troweling operations.**

***--or--***

**3.\_\_ DUAL PASS DRY SHAKE APPLICATION**

**A. This procedure is the best method to use when a colored dry shake hardener is applied for aesthetic purposes.**

**B. Dry shake shall be applied at a rate of [1.0 to 3.0] [select application rate] pounds per square foot by calibrated mechanical spreader except small areas not accessible to mechanical spreader may be hand applied.**

**C. Allow slab to dry sufficiently to a point where weight of the finishers and power-trowel equipment do not leave indentation.**

**D. If any excess bleed water remains on surface, use a rubber hose to drag water from the surface.**

**E. Using float shoes, break the surface of slab open and apply 2/3 of desired amount of dry shake.**

**F. Once dry shake has fully darkened due to absorption of moisture, continue floating process to work dry shake into surface.**

**G. Once first application of dry shake has been worked into the slab, immediately apply remaining 1/3 of dry shake to slab.**

**H. Pay close attention to area where color may not be prevalent from first application.**

1. **Continue floating process to work second application into slab.**

**J. After slab has been given time to further “tighten up” begin final troweling operations.**

3.\_\_ FINISH

1. Finish slab according to specifications, paying close attention not to burnish the surface.

3.\_\_ CURE

A. Cure as specified.