



SECTION 099623 – GRAFFITI-RESISTANT COATINGS

SPECIFICATION FOR ISO-TEK™ 8515 AG

Non-Sacrificial Penetrating Anti-Graffiti Treatment for Porous Building Materials

SPECIFIER NOTES: This guideline specification has been prepared to assist architects and design professionals in the preparation of project master specifications. It is intended for use by qualified design professionals and is not intended to be used verbatim. Appropriate modifications to meet specific project requirements may be required.

This specification is written according to the Construction Specifications Institute (CSI) Master Format '04. For more information, contact Ghostshield; KreteTek Industries, Inc., 66 River Road, Hudson, NH 03051 • Phone: (855) 573-8383 • Website: ghostshield.com • Email: support@ghostshield.com.

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes: High-performance Anti-Graffiti coatings and special preparation of the following surfaces:
1. Cast-in-place concrete.
 2. Precast concrete.
 3. Concrete unit masonry (CMUs).
 4. Clay brick masonry.
 5. Sandstone
 6. Terra-Cotta
 7. Limestone
 8. Marble and Granite
 9. Glass-fiber Reinforced Concrete
 10. Mineral-based Stucco
 11. Mineral-based Paints
- B. Related Requirements:
1. Section 040110 – “Masonry Cleaning” for cleaning and removing paint from masonry
 2. Section 042200 – Concrete Unit Masonry: Substrate for application of Anti-Graffiti Coating
 3. Section 071900 – Water Repellents for unpainted surfaces.

1.2 PREINSTALLATION MEETINGS

- A. Attend a preconstruction conference to be held with the Owner’s Representative, Architect, the General Contractor’s field superintendent, and all other involved trades to discuss and coordinate the work covered under this Section.



1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include manufacturer's printed statement of VOC content.
 - 2. Include manufacturer's recommended number of coats for each type of substrate and spreading rate for each separate coat.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Applicator.
- B. Manufacturers' literature for all materials specified for use on this project, each properly labeled and referenced to appropriate Specification Section, in time to prevent delay of the project.
- C. Product Certificates: For each type of anti-graffiti coating
- D. Safety Data Sheets (SDS) for all materials to be used.
- E. Manufacturer's requirements and testing procedures for moisture conditions (moisture vapor emission rate, relative humidity, etc.) of the concrete at time of installation necessary to ensure proper bond.
- F. Manufacturer's written instructions regarding equipment, materials and workmanship requirements for surface repairs, surface preparation, and installation of anti-graffiti coating materials.
- G. Preconstruction Test Reports: For anti-graffiti-treated substrates.
- H. Field quality-control reports.
- I. Special Warranty Article

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For all anti-graffiti coatings to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Contractor and Installer Qualifications:
 - 1. The installer shall be licensed by the manufacturer of the products to be used on the project with a minimum of 5 yrs' experience in the application of similar impregnating anti-graffiti coatings and concrete repair materials.
 - 2. The Contractor's site superintendent shall have at least 5 yrs' experience supervising the installation of anti-graffiti coatings and concrete repair materials.
 - 3. Upon request, provide the Engineer with a list of five representative projects successfully completed by the contractor that are of similar scope and size. For each project, provide the project name, Owner's name, Owner's Representative name and phone number, description of the work, name of Anti-Graffiti Coating or

impregnating water-repellent applied, Project supervisor, total cost of the impregnating coating/treatment work vs. the total cost of the project, and the project completion date.

- B. Mockups: Prepare mockups of each required anti-graffiti coating on each type of substrate required to demonstrate aesthetic effects, for preconstruction testing, and to set quality standards for materials and execution.
1. Locate mockups in locations that enable viewing under same conditions as the completed Work
 - a. Size: 25 sq. ft. (2.3 sq. m)
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- C. Manufacturer's Field Representative: The Contractor shall arrange with the manufacturer of the anti-graffiti coating to have the services of a competent field representative at the site to approve surface preparation before installation of the coating and any concrete repair material. The Manufacturer's Field Representative shall instruct the crew on proper installation of materials and observe the installation of the products at the beginning of the work. The Field Representative shall remain at the jobsite and continue to instruct until the field representative, Architect, and Owner's Representative are satisfied that the crew has mastered the technique of installing the products successfully.

1.7 PRECONSTRUCTION TESTING

- A. Preconstruction Testing: Engage a qualified testing agency to perform preconstruction testing of anti-graffiti coating on field mockups.
1. In addition to verifying performance requirements, use mockups to verify manufacturer's written instructions for application procedure and optimum rates of product application to substrates.
 2. Propose changes to materials and methods to suit Project.

1.8 FIELD CONDITIONS

- A. Limitations: Proceed with application only when the following existing and forecasted weather and substrate conditions permit water repellents to be applied in accordance with manufacturers' written instructions and warranty requirements:
1. Concrete surfaces have cured for not less than 28 days.
 2. Any repointing completed must be and allowed to cure for at least 3 days.
 3. If surface was treated with a silane water repellent agent, it must be allowed to cure for at least 5 days.
 4. Building has been closed in for not less than 30 days before treating wall assemblies.
 5. Ambient temperature is above 40 deg F (4.4 deg C) and below 85 deg F (29.4 deg C) and will remain so for 24 hours.
 6. In direct sunlight resulting in temperatures outside of the range listed above.
 7. Substrate is not frozen and substrate-surface temperature is above 40 deg F (4.4 deg C) and below 85 deg F (29.4 deg C).
 8. Rain or snow is not predicted within 24 hours.
 9. Not less than 24 hours have passed since surfaces were last wet.

10. Windy conditions do not exist that might cause water repellent to be blown onto vegetation or surfaces not intended to be treated.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer and Applicator agree(s) to repair or replace materials that fail to maintain water repellency specified in "Performance Requirements" Article within specified warranty period for pre-application approval.

PART 2 - PRODUCT

2.1 GRAFFITI-RESISTANT COATINGS

- A. Non-Sacrificial, Clear, Breathable, Penetrating Anti-Graffiti Coating Treatment: Containing 15 percent or more actives of organofluorosiloxane with a water carrier; and with 20 g/L or less of VOCs. Suitable for application to porous surfaces including masonry, concrete, stone, brick, CMU, and stucco. Dries invisible and is non-yellowing; Intended for use on both interior and exterior surfaces. Will provide exceptional protection against a wide-variety of graffiti materials, including spray paint, marker, ink, bituminous paints, asphalt sealers and other solvent or waterborne paints using a non-hazardous cleaner and low-pressure water-blasting.
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Ghostshield; KreteTek Industries, Inc.; ISO-TEK™ 8515 AG.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements and conditions affecting performance of the Work.
 1. Verify that surfaces are clean and dry in accordance with manufacturer's requirements. Check moisture content in three representative locations by method recommended by manufacturer.
 2. Verify that there is no efflorescence or other removable residues that would be trapped beneath the application of anti-graffiti treatment.
 3. Verify that required repairs are complete, cured, and dry before applying anti-graffiti treatment.
- B. Test pH level in accordance with anti-graffiti treatment manufacturer's written instructions to ensure chemical bond to silica-containing or siliceous minerals.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. New Construction and Repairs: Allow concrete and other cementitious materials to age before application of water repellent, in accordance with repellent manufacturer's written instructions.

- B. Cleaning: Before application of anti-graffiti treatment, clean substrate of substances that could impair penetration or performance of product in accordance with anti-graffiti treatment manufacturer's written instructions or as follows:
 - 1. Cast-in-Place Concrete, Precast Concrete, Cast Stone, and Concrete Unit Masonry: Remove oil, curing compounds, laitance, and other substances that inhibit penetration or performance of anti-graffiti treatment in accordance with ASTM E1857
 - 2. Clay Brick Masonry: ASTM D5703.
 - 3. Natural Stone: ASTM C1515 or ASTM D5107.
 - 4. Portland Cement Plaster (Stucco): ASTM E1857
- C. Protect adjoining work, including mortar and sealant bond surfaces, from spillage or blow-over of anti-graffiti treatment. Cover adjoining and nearby surfaces of aluminum and glass if there is the possibility of anti-graffiti treatment being deposited on surfaces. Cover live vegetation.
- D. Coordination with Mortar Joints: Do not apply anti-graffiti treatment until pointing mortar for joints adjacent to surfaces receiving water-repellent treatment has been installed and cured.
- E. Coordination with Sealant Joints: Do not apply anti-graffiti treatment until sealants for joints adjacent to surfaces receiving water-repellent treatment have been installed and cured.
 - 1. Anti-graffiti treatment work may precede sealant application only if sealant adhesion and compatibility have been tested and verified using substrate, anti-graffiti treatment, and sealant materials identical to those required.

3.3 APPLICATION

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect the substrate before application of anti-graffiti coating and to instruct Applicator on the product and application method to be used.
- B. Apply anti-graffiti coating to prepared substrates within three days after completion of the surface preparation.
- C. Stir material thoroughly before and during application. Do not dilute or alter material for purposes other than specified.
- D. Application rates are dependent on porosity and surface roughness of substrate. Follow manufacturers published instructions.
- E. Test in an inconspicuous area to ensure the desired coverage and appearance is achieved.
- F. Anti-graffiti coating is best applied using a HLVP (High Volume Low Pressure) gun sprayed 12-18" away from the surface. It is recommended to apply using a fine spray. Apply primer coat directly to substrate and ensure liquid is distributed evenly. Water-repellent effect may appear within a few minutes.
- G. (2) Two additional applications at full strength may be required for permanent graffiti protection. Before applying second and third coat, allow surface to dry completely. If second and third coat are being repelled by primer coat, the addition of up to 1 cup (8 ounces) of isopropyl alcohol per gallon of anti-graffiti is permitted. Once isopropyl alcohol is added, there is a shortened pot life of 8 hours.
- H. Do NOT apply sealer to concrete surfaces:

1. that are damp or have damp repairs. If rain suddenly begins during installation, immediately stop application of sealer and cover the newly impregnated areas.
 2. if the conditions (e.g., weather or surface conditions) do not meet the requirements of Para. 1.8 above or are not expected to meet the requirements for anytime within a 24 hr. period after installation.
- I. Do not disturb sealed surfaces for a minimum of 6 hrs after the application of the product.

3.4 FIELD QUALITY CONTROL

- A. Testing of Anti-Graffiti Coating: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when Anti-Graffiti Coating is being applied:
1. Owner will engage the services of a qualified testing agency to sample water-repellent material being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 2. Testing agency will perform tests for compliance of anti-graffiti material with product requirements.
 3. Owner may direct Contractor to stop applying anti-graffiti if test results show material being used does not comply with product requirements. Contractor shall remove noncomplying material from Project site, pay for testing, and correct deficiency of surfaces treated with rejected materials, as approved by Architect.

3.5 CLEANING

- A. Immediately clean anti-graffiti coating from adjoining surfaces and surfaces soiled or damaged by anti-graffiti coating application as work progresses.
- B. Comply with manufacturer's written cleaning instructions.

END OF SECTION 099623