

Adsil MicroGuard® Advanced Siloxane Technology

ANTI-GRAFFITI - CLEAR HARD TILE & GROUT SYSTEM SPECIFICATION

DOCUMENT NUMBER AD1000-02

SECTION 09800 – SPECIAL PROTECTIVE TREATMENT

PART 1, GENERAL

1.01 General requirements of the Maintenance Schedule Manual shall apply to all work specified in this section.

1.02 Quality Assurance

- A. Installer (installers shall be proficient in anti-graffiti protective treatment systems)
 - 1. Installer shall be trained, by Adsil or its appointed agents, using Specification AD1000-02 procedures, established in accordance with Adsil methods and standards for application of its anti-graffiti clear protective treatment.
 - 2. Installer shall ensure that all technicians utilized for work in this section are –
 - a. Trained & certified journeymen in the MicroGuard® clear protective treatments.
 - 3. Installer shall ensure that any specialized equipment, as required by the manufacturer, will be used for work in this section.

1.03 Submittals

- A. Product Data: Submit manufacturer's technical information, including Product Technical Data Sheets, Material Safety Data Sheets, detailing job site and personal safety instructions, product mixing instructions and application instructions for each material specified. Identify by manufacturer's catalog number and general classification:
 - 1. Technical Sheet TS-45; MicroKleen™ Industrial Cleaner & Degreaser PLC-1
 - 2. Technical Sheet TS-44; MicroKleen™ Equipment Cleaner AD1-919
 - 3. Technical Sheet TS-43; MicroKleen™ Retarder Solvent AD1-103
 - 4. Technical Sheet TS-52; MicroGuard® Anti-Graffiti Clear GL Surface Treatment AD00/AD1000
 - 5. Technical Sheet TS-34; MicroGuard® Clear Sealer (used for certain circumstances)

1.04 Delivery and Storage

- A. Deliver materials in sealed containers with manufacturer's labels intact.
- B. Store materials in a protected area at a temperature range between 55° and 85° F.

1.05 Job Conditions

- A. Apply MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment only under the following prevailing conditions:
 - 1. Air, surface and material temperatures are not below 60° F. or above 90° F.
 - 2. Prevent wide temperature variations, which might result in condensation forming on the freshly treated surfaces or could negatively affect curing of the treatment.
 - 3. Avoid product mixing or application of MicroGuard® AD00/AD1000 when rain, heavy dew or fog conditions are imminent or could occur within 4 hours of treatment installation (exterior installations).
- B. Mask, drop cloth or construct adequate containment in order to protect surfaces not to be cleaned or protective treated.

PART 2, PRODUCTS

2.01 Manufacturer

- A. Products of Adsil, Inc., Daytona Beach, Florida 32117 USA (phone: 386-274-1382)

2.02 Materials

- A. Surface Cleaners and Conditioners
 - 1. Adsil MicroKleen™ PLC-1 Industrial Cleaner & Degreaser
 - 2. Adsil MicroKleen™ AD1-919 Equipment Cleaner
- B. Clear Protective Surface Treatments
 - 1. Adsil MicroGuard® AD00/AD1000 Anti-Graffiti Clear Gloss Surface Treatment
 - 2. Adsil MicroGuard® AD702 Clear Sealer
- C. Reducing Solvent Blend for MicroGuard® AD00/AD1000
 - 1. Adsil MicroKleen™ AD1-103 Retarder Solvent

2.03 Product Requirements

- A. Surface Cleaners
 - 1. Cleaners shall be free from any known carcinogens or teratogen materials.
 - 2. Cleaners shall be phosphorous free.
 - 3. Cleaners shall be free from d'limonene.
- B. Clear Surface Treatment
 - 1. Surface Treatment shall be inorganic, ambient temperature cured film structures. Surface Treatment shall be non-sacrificial type and must pass 50 standard MEK solvent rub cycles.
 - 2. Surface Treatment shall adhere to reactive (bare, non-ferrous metal) substrates by direct atom-to-atom covalent bonding methods. Surface Treatment shall adhere by London Force bonding method on properly prepared bare hard tile & grout, concrete, rigid fiberglass or fully cured painted surfaces.
 - 3. Surface Treatment shall produce a dry film thickness no greater than 12 microns, on average (1 mil = 25.4 microns).
 - 4. Surface Treatment shall have passed ASTM G-21 testing, with a zero (0) microbial spore growth development rating. The standard ASTM G-21 test must have been conducted and verified by an accredited, third party, independent laboratory.
- C. Graffiti Removal Cleaners
 - 1. Any commercially available graffiti remover.

2.04 Material Preparation

- A. Catalyze and/or mix materials strictly in accordance with manufacturer's most current printed technical literature.
- B. Thinning/Reducing: Use MicroKleen™ AD1-103 Retarder Solvent only, for reducing MicroGuard® AD00/AD1000 Anti-Graffiti Clear Gloss Surface Treatment.

PART 3, EXECUTION

3.01 Pre-work Inspection

- A. Examine all surfaces to be treated and report any conditions that would adversely affect the appearance or performance of the anti-graffiti treatment system and which cannot be put into an acceptable condition by specified surface preparation methods.
- B. Remove, repair and/or replace any surfaces, which cannot be put into an acceptable condition.
- C. Do not proceed with the mixing or application of the specified protective treatment until all surfaces can be placed into an acceptable condition.

3.02 Equipment Requirements

- A. Spray Equipment (option 1) for MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment
 - 1. Airless Sprayer; either piston or diaphragm pump, capable of pumping 1/3 gallon of material, per minute of continuous operation.
 - 2. A liquid filled glycerin gauge to be mounted between the pump and fluid hose.
 - 3. Standard production airless gun capable of accepting in excess of 3,000 psi.
 - 4. Reverse-a-clean tip, from a 311 to a 611 orifice/fan size.
 - 5. Standard chemical resistant airless fluid hose with swivel whip attachment.
- B. Spray Equipment (option 2) for MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment
 - 1. LVLP or HVLP Gun (maximum of 18 psi), or equivalent
 - 2. Fluid Nozzles from 9 to 12 orifice/fan size
 - 3. External Mix Air Cap
 - 4. Air Hose rated up to 200 psi
 - 5. Oil & Water Separators
 - 6. Air Compressor (pressure gauge adjustable) capable of delivering 3 CFM @ 90 PSI.
- C. Natural Hair Bristle or Nylon Trim Brushes.
- D. Adsil Product Mixer with timer.
- E. Assorted tools, extension cords, water hose & nozzle, clean buckets, clean cotton cloths, scrub brushes mounted on pole extension handles, ladders, etc;
- F. Rolls of 6 mil plastic sheathing and/or other drop cloths.
- G. Hygrometer and Standard Probe Moisture Meter.
- H. Distilled water and pH paper kit.
- I. Latex gloves, safety glasses, NIOSH carbon-filtered respirator.

3.03 Surface Preparation

- A. General Area Preparation
 - 1. Prior to all surface preparation operations, completely mask, tarp, build containment, remove or otherwise adequately protect all surfaces not to be cleaned and/or protective treated.
 - 2. Using 6 mil plastic sheathing or drop cloth, completely protect any areas not to be cleaned. Remove automobiles from the area (spray coating in exterior locations).
 - 3. Cordon off and place signage indicating work is in process. The work area is closed to any/all persons not involved in the coating process.
- B. Specific Cleaning
 - 1. Apply properly diluted MicroKleen™ PLC-1 Cleaner & Degreaser to the area to be cleaned and agitate by hand or mechanical means to clean contamination from surface.
 - 2. Thoroughly rinse the area with clean water. Repeat the cleaning process, if necessary. Continue working until the entire surface area has been thoroughly and completely cleaned free from surface contamination, e.g., graffiti, oxidation, exhaust fumes, oil, fluids, bond release agents, dirt, bird droppings, mildew, mold, etc;
- C. In some jurisdictions, the use and collection of cleaning materials may (and generally are) regulated. It is the responsibility of the Installer to be aware of any such regulations and to take appropriate steps to collect and dispose of cleaning materials, in accordance with any such regulations.
 - a. In these instances, the Installer must control the material waste stream.
 - b. To provide a means of collection of material for proper disposal, according to regulations.
 - c. To collect, place in sealed drums and properly label any regulated waste stream material per the specifications outlined in Section D.
- D. Waste Disposal (Jobsite)
 - 1. All liquid composed of cleaning solution, coatings and solvents must be poured into closed top drums and these drums must be sealed with bungs, when not in use, as required by the regulatory agency of the State (Installer responsibility).
 - 2. All drums must be properly labeled, according to the hazardous rating of the material in the drum, complete with accumulation date (Installer responsibility).
 - 3. All empty coating bottles, with caps removed, must be deposited into a designated roll-off area that is provided by the Customer's Environmental Department (Installer & Customer responsibility).
 - 4. Drums must be picked up for disposal on a first-in-first-out (FIFO) basis and within 90 days of the accumulation date (Customer responsibility).
 - 5. Drums containing spent cleaning solution, solvents and coating will require weekly inspection (Installer & Customer responsibility).
 - 6. Any leaking drums must be transferred immediately by notification to the Customer's Environmental Department (Installer & Customer responsibility).
 - 7. The Installer must notify the Customer's Environmental Department of all full drums that are ready to be picked up or are approaching the 90 day accumulation date (Installer responsibility).
 - 8. All usable coating containers and solvent containers must be kept in a designated place and must be marked clearly for good housekeeping practice (Installer responsibility).
 - 9. Every effort should be made to avoid spills, to the ground, or by overfilling the drums, causing spills to the ground. Notify the Customer's Environmental Department immediately of any spills (Installer responsibility).
- E. Specific Sealing (specific instance)
 - 1. When porous sanded or un-sanded lime grout is used it is desirable to pre-seal the hard tile & grout with MicroGuard® AD702 Sealer preliminary to installation of MicroGuard® AD00/AD1000 Anti-Graffiti Clear Gloss Surface Treatment. Refer to Technical Sheet TS-34 for product use.

3.04 Mixing and Catalyzing

- A. MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment
 - 1. MicroGuard® AD00/AD1000 is a three-component material and must be properly mixed for proper drying and curing to occur. This product is packaged, in kit form, with separate containers for **Components A, B & C**.
 - 2. Refer to Technical Sheet TS-52 and follow manufacturer's current published mixing, chemical induction and pot life instructions free from deviation.

3.05 Application of Protective Treatment

- A. Strictly follow these Adsil recommendations and instructions regarding product material and mixing, so as to provide the best quality work.
- B. All materials shall be applied under adequate illumination, evenly distributed and properly applied.
- C. Never mix or apply MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment if the ambient temperature is, or will be, below 60° F. for 5 days or above 90° F during installation.
- D. Never apply MicroGuard® AD00/AD1000 if the ambient air temperature is within 5° of dew point and dropping.
- E. All materials shall be applied in an even and full continuous film, free from skips, holidays or pinholes and at a maximum of 1.5 mils, wet film thickness to produce 12 microns, dry film thickness.
 1. MicroGuard® AD00/AD1000 is best applied by spray technique.
 2. Use good journeyman spray techniques in order to achieve a thin, uniform film deposit at 1.5 mils WFT, 12 microns DFT and free from skips, holidays or runs. If runs occur, use a natural hair bristle or nylon brush to feather the runs into a smooth and continuous film.
- F. The surface being treated and method of application will ultimately dictate the square foot per gallon yield of MicroGuard® AD00/AD1000. As a general rule of thumb, the following guidelines can be used; 600 - 650 ft²/gallon, depending on surface texture.
 1. Continue application until the entire surface has been protective treated. MicroGuard® AD00/AD1000 Anti-Graffiti Clear will dry to touch in approximately 2 hours and will thoroughly cure within about 5 days, depending on prevailing ambient temperature & humidity ranges. Never conduct any post graffiti removal procedures for at least 72 hours following application of MicroGuard® AD00/AD1000.

3.06 Clean up

- A. Job Site Clean Up – General
 1. Remove all 6 mil plastic sheathing material. Double bag into plastic garbage bags and dispose of this material consistent with environmental or land fill regulations.
 2. Any working materials, such as contaminated cloths, need to be disposed of in a safe and proper manner and consistent with site specifications, environmental or land fill regulations.
 3. All empty containers of Adsil products must be collected and placed in appropriate collection bins for proper disposal (designated roll-off area).
 4. Remove all masking and other associated debris from the job site and leave the storage area clean.

3.07 Inspection

- A. Inspect and repair all work that is not acceptable to the Specifier and request the final acceptance.

3.08 Protective Surface Treatment Schedule

- A. As indicated on this schedule
 1. Clear Anti-Graffiti Treatment installation onto all designated surfaces.
 - a. Apply MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment onto cleaned and properly prepared surfaces, per Project Manual.
 2. Graffiti removal from all designated surfaces.
 - a. Allow the MicroGuard® AD00/AD1000 film to cure for a minimum of 72 hours before attempting graffiti removal.
 - b. Most common graffiti; off-the-shelf aerosol paints, permanent markers, ink, et al, can be most efficiently removed using commercially available graffiti removers, either in liquid or paste form, followed by cloth wiping.
 - c. For more textured surfaces, the use of a stiff bristled scrub brush may be required to remove graffiti 'shadowing' from recessed grout areas.

3.09 Adsil Specification AD1000-02

- A. This Specification is a general work order specification. It is intended for use, as a general guideline, for the successful application of Adsil MicroGuard® AD00/AD1000 Anti-Graffiti Clear Surface Treatment onto hard tile & grout, stainless steel, non-ferrous metals, bare concrete or rigid fiberglass surfaces, which are subject to various graffiti tagging conditions. Extensive laboratory and field testing has shown that the inorganic film structure of cured MicroGuard® AD00/AD1000 is non-sacrificial and resistant to a wide variety of aromatic solvents and cleaners associated with positive graffiti removal.

END OF SECTION – 09880

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