



TECHNICAL DATA- AF 005 WATER REPELLENT AND SEALER (WRS)

PRODUCT DESCRIPTION:

AF005 is a one component water based sodium methyl siliconate solution designed to impart water repellency to a wide variety of surfaces. The siliconate reacts with moisture and carbon dioxide in the air to form an insoluble water resistant resin. This product offers low water absorption that is maintained for long periods of time. Even exterior applications with AF005 show little change in water repellency over a five to ten year period.

BENEFITS OF USE:

Concrete sidewalks, drives or floors:

- * Increases durability by improving resistance to freeze thaw effects (horizontal surfaces that bear traffic will need to be retreated more often to maintain optimum performance)
- *Improves weathering and reduces efflorescence of natural stone, precast stone and ceramics.
- *Protects and fortifies concrete as it seals against moisture damage.
- *Product will not discolor or stain under normal use
- *Application of the AF005 will reduce dusting and increase concrete life

VOLATILE ORGANIC CONTENT:

Water based material with essentially no VOC's

COLOR:

clear to very opaque color

RECOMMENDED FILM THICKNESS:

Apply until surface is saturated without puddles

COVERAGE PER GALLON:

When the surface is fully saturated, coverage will depend on the absorptivity of the substrate resulting in 100 to 400 square feet per gallon coverage.

PACKAGING INFORMATION:

This product is available in 1 gallon, 5 gallon and 55 gallon containers. (approximately 8.5 pounds/gallon)

SHELF LIFE:

Six months in unopened containers when stored between 50-80 degrees F.

FINISH CHARACTERISTICS:

This product does not change the overall appearance of the substrate. After the material is applied and allowed to dry for 24 hours, it will not be readily apparent that the application has occurred, except the concrete will be fortified and exhibit excellent water repellency.

ABRASION RESISTANCE:

The application of this product will increase the abrasion resistance of most substrates. Results will vary according to substrate type.

ADHESION:

Because this material becomes an integral part of the surface that is coated and does not form an impermeable barrier, delaminations do not occur.

DOT CLASSIFICATION:

"Corrosive liquid N.O.S., 8 UN1760, PGIII"

VISCOSITY:

Less than 25 cps

CURE SCHEDULE: (70°)

Allow the material to dry for a 24 hour period of time to obtain the maximum benefits of the application. This allows the material to react with available CO₂ and moisture and become an integral part of the substrate.

APPLICATION TEMPERATURE:

55-90 degrees F.

PERFORMANCE OF AF005

TYPE OF MATERIAL	% ABSORPTION
shale	0.02
quarry stone	0.49
quarry stone (untreated)	2.55
white kaolin	0.40
white kaolin (untreated)	12.0
streator	0.30
streator (untreated)	7.60

OTHER VARIOUS SUBSTRATES

TYPE OF MATERIAL	% water exclusion
limestone	67.0
sandstone	79.5
concrete block	75.5

*The percent water exclusion is based on and in comparison to an untreated control sample.

*When properly used, this product can reduce water absorption while still maintaining greater than 50% breathability. (Details of these test procedures can be found in the ASTM standard C-67 and U.S. Federal Specifications SS-W-110C.)

PRIMER:

None required. If applying multiple coats, a wet edge should be maintained. If the AF005 dries between applications, water spotting may result.

TOPCOAT:

None required. Multiple coats of this product are compatible (see information under primer).

LIMITATIONS:

*The surface can be damp prior to application but there should be no standing water or puddles.

* Remove all overspray before drying from all glass or metal surfaces as this product can etch the surface.

*Under certain conditions, a precipitate of sodium carbonate may be deposited as the water repellent dries. See application procedures on the reverse side for more details. Always apply a test patch to determine the suitability before using.

*Physical properties listed on this technical data sheet are typical values and not specifications.

*See reverse side for application instructions.

* See reverse side for limitations of our liability and warranty.

MIXING AND APPLICATION INSTRUCTIONS (AF005)

- 1) **PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 50 and 80 degree F. Keep from freezing.
- 2) **SURFACE PREPARATION:** All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free application. Under certain conditions, a precipitate of sodium carbonate may be deposited as the water repellent dries. Substrates with a high acid level will react with the water repellent and cause some neutralization of the material before it is absorbed into the surface leaving a white precipitate. This white precipitate is more readily noticeable on darker concrete and substrates. A test should be made to determine that none of these conditions exist. The substrate can be damp prior to application but there should be no standing water or puddles.
- 3) **PRODUCT APPLICATION:** Stir material before using. Apply material without thinning with a brush or spraying equipment. Avoid rundown, overlapping or second coating on vertical surfaces. On vertical surfaces, work from the top down. When applying the material, always maintain a wet edge as this will reduce any chance of water spotting. When spraying, this product is caustic and can kill vegetation, stain or etch glass, aluminum, metal and plastic. If contamination does occur, rinse it off with water immediately. If a white precipitate of Na_2CO_3 should form due to high acid content, rundown, overlapping, or second coating, rinsing with a stiff broom will usually be able to remove the spotting. However, it may be necessary to remove the white spots with a wire brush or blasting. Since AF005 water repellent does not seal pores, water can evaporate through the wall face (the wall can breathe), if water gains entrance at sills, copings, or faulty flashings etc., it can still be carried through brick by capillarity. However, if capillary water is traveling toward the treated face, most of it will be stopped at the depth to which the AF005 has penetrated. At this point it will evaporate, passing through the treated area as water vapor. This normally will present no problem. However, if the capillary water source contains soluble salts, they will be deposited at this point within the substrate where this water evaporates. In essence, this reduces visible efflorescence but there is this danger: If capillary water deposits excessive amounts of soluble salts, their crystalline growth can develop sufficient pressure resulting in spalling. Spalling may also result from substantial pressures of water freezing behind the face of the surface before evaporation can occur. These conditions both develop from outside sources of water. This product is developed to prevent the migration of water beneath the treated surface while still allowing water vapor to escape. Applications of this material will prevent positive side absorption of water and improve the capability of the substrate to resist spalling. Although the material will strengthen the substrate, outside sources of water may cause problems if the hydrostatic pressure is sufficiently great.
- 4) **RECOAT OR TOPCOATING:** Normally one coat is all that is required. It is best to make a second pass when required only while the substrate is still wet. Avoid overlapping wet to dry as this can cause water spotting.
- 5) **CLEANUP:** Use any suitable detergent and water.
- 6) **FLOOR CLEANING:** Caution! Some Although very unlikely, some cleaners may affect the color of the treated surface. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.
- 7) **RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals 24 hours has passed. Keep the floor dry for this period (excluding the application of the product.)

NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

*We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. **NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT.** We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may **CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.***