

Spray Application of Senersshield-R®

TECHNICAL BULLETIN

Introduction

Senersshield-R is a liquid-applied air and water-resistive barrier that has been successfully used under EIFS and other claddings for many years. In most cases, it has been applied using paint rollers or paint brushes. Another method, spraying, is now available when applying Senersshield-R. This bulletin describes spray application considerations, techniques and limitations.

Recommended Spray Equipment

BASF Wall Systems has evaluated diaphragm pump systems supplied by Apla-Tech, Inc. and Benron Equipment and Supply, Inc. These simple, low-cost pumps operate using a compressed air supply that both feeds material to the spray equipment and assists with spray atomization. The Senersshield-R application procedures described in this bulletin are limited to these approved pumps. BASF has also evaluated rotor-stator pumps, and specifically **does not** recommend those types of pumps for use with Senersshield-R.

For more information on pump and spray equipment, please consult with Apla-Tech Inc (www.apla-tech.com) or Benron Equipment and Supply, Inc. (www.benron.com).

When mixing and spraying Senersshield-R, always wear all appropriate safety equipment including but not limited to eye protection, approved mask, gloves, hard hats and safety shoes.

Preparing Senersshield-R for Spray Application

Senersshield-R is suitable for spray application right out of the pail. Dilution of Senersshield-R is not required or recommended. Each 5-gallon pail of Senersshield-R will provide approximately 400 ft² of coverage at 10 mil wet thickness.

To prepare Senersshield-R for use, thoroughly mix using a drill mixer, completely homogenizing the Senersshield-R.

Equipment Start-Up

Prior to starting up equipment, carefully read and follow the equipment manufacturer's operating instructions and familiarize yourself with equipment features. Ensure that the air compressor has a capacity and pressure rating that meets the pump manufacturer's specifications.

It is important to ensure that all equipment is clean prior to use.

After the pump has been assembled, connect the material hose and the air line from the compressor into the pump. Do not install the gun at this time.

Pour water into the material reservoir and start the pump. Allow water to pump through the line until all of the water has run out of the reservoir. When complete, turn off the pump and drain any excess water out of the hose.

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Pour the mixed Senershield-R into the reservoir. Start the pump and re-circulate several gallons of Senershield-R back into the reservoir. This will ensure that air is purged from the supply line.

Next, securely attach the spray gun to the end of the hose, ensuring that it has been properly attached.

Activate the pump, and allow it to build up pressure. Once the system is pressurized, the pump will shut off, but will cycle back on as required to maintain pressure.

Select a test area and begin to spray. Air pressure directly affects the spray pattern; adjustment will probably be needed. Set the air pressure so that the gun provides a clean spray pattern about 16 inches wide at the point of contact with the substrate when sprayed from a distance of 18 to 24 inches.

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Applicators should protect all surfaces that are not to be coated. Mask off sensitive areas (such as windows) and clean off any overspray before Senershield-R hardens. When dry, Senershield-R forms a tough, long-lasting membrane with excellent adhesion properties.

The first areas to spray are corners and sheathing joints, where 4" or 9" Sheathing Fabric must be embedded in Senershield-R. Precut the 4" or 9" Sheathing Fabric to convenient lengths before spraying.

To apply Senershield-R to corners and sheathing joints, turn the air pressure down slightly to narrow the spray pattern. This will also reduce the amount of Senershield-R flowing through the spray gun. Next, direct the spray gun at the corner or sheathing joint, holding the gun at as close to a 90° angle from the substrate as possible, about 18 to 24 inches away from the wall. Spray Senershield-R in the target areas around corners and joints that require sheathing fabric.

Immediately embed the precut 4" or 9" Sheathing Fabric into the wet Senershield-R. Pre-wet (moisten) a 4" 3/4" nap paint roller with water; spin out the excess water.* Then saturate with Senershield-R; you will use it to wet out and embed the Sheathing Fabric into the wet Senershield-R. Roll the 4" or 9" Sheathing Fabric outward toward its edges. Never roll in the reverse direction (i.e., back and forth), because this could cause the fabric to spool onto your paint roller. Ensure that all sheathing fabric lays flat against the sheathing, without blisters, bubbles or fish mouths.

Optionally, a trowel can be used to embed sheathing fabric into the wet Senershield-R.

Spot all fasteners with Senershield-R. Once sheathing fabric has been installed, you can readjust the pump pressure and begin to spray the wall. Wet-on-wet application of Senershield-R on top of Sheathing Fabric joints and corners is acceptable.

When spraying, continue to keep the spray gun as close to a 90° angle from the substrate as possible, ensuring full coverage of the sheathing. Overlap spray patterns to ensure uniform coverage free from pinholes. Spray to a minimum 10-mil wet thickness. Verify thickness using a wet-film mil gauge.

In cases where coverage is incomplete, where sagging due to overspray is an issue, or where pinholing of the Senershield-R is an issue, it may be necessary to back roll the Senershield-R with a pre-wetted ¾ inch nap paint roller*. Prepare the roller by moistening it in water. Spin out excess water. Load the roller with Senershield-R and roll out over the wet, spray-applied Senershield-R. Do not attempt to over-extend the Senershield-R. Maintain a minimum 10-mil wet film thickness. Although it is an extra step, back rolling takes very little effort when the correct amount of Senershield-R has been applied to the wall.

***Note: Pre-wetting the paint roller with water before loading it with Senershield-R is extremely important. Senershield-R is readily absorbed onto a moist roller, and applies easily and uniformly. It will not saturate a dry roller, resulting in uneven, poor quality application. Simply wet the roller and spin out excess water before loading the roller with Senershield-R.**

Equipment Cleanup

Since Senersshield-R forms a tough, tenaciously bonded surface coating when it dries, it is important to clean spray equipment immediately after use. Liquid Senersshield-R washes up easily. Dried Senersshield-R does not.

Once spraying has been completed, remove the spray gun from the material hose and place the gun into a bucket of water, to prevent the Senersshield-R from hardening inside the gun.

Turn on the pump and discharge leftover Senersshield-R into a pail. Turn off the pump, then pour water into the reservoir and turn the pump back on. Discharge the remaining Senersshield-R into the recovery pail until water begins to flow from the hose. Turn off the pump. Replace the lid on the recovery pail; seal it and save the material for future use.

Continue to run water through the hose, cleaning the sides of the hopper, until it starts to discharge clean water and the sides of the hopper are clean. At this point, shut off the pump and reconnect the spray gun. Spray water through the gun until it is clean. Turn off the pump and release pressure in the hose by pulling the trigger of the gun before attempting to remove the gun. Remove the gun when pressure has dissipated. Disconnect the hose from the pump and place cleaning balls directly inside the hose. Reconnect the hose to the pump. Turn the pump on and push the cleaning balls through the hose until they discharge out the other end. Repeat this process several times to flush out any remaining Senersshield-R. Dispose of all excess materials in accordance with local, state and federal regulations.

Flush any water from the reservoir. The pump will drain when you remove the material line from the pump. Store the pump, hoses and spray gun in a secure place and protect from freezing.

Limitations

The greatest productivity gains are realized on expansive walls that have few areas that must be protected from overspray (e.g. windows). Small, complex walls may be more suited to roller or brush application.

Note that the weather plays a role – windy days may be less than ideal for spraying any material.

Strive to keep the pump within one scaffold height of the area being sprayed. This helps to maximize hose/tip pressure.

Technical Information

Consult the BASF Technical Services Department for specific recommendations concerning all other applications. Consult the Senergy website, www.senergy.basf.com, for additional information about products and systems and for updated literature.

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Note

BASF Wall Systems is an operating unit of BASF Construction Chemicals, LLC. (herein after referred to as "BASF Wall Systems")

Residential Policy

On one and two-family residential framed construction, BASF Wall Systems requires that the wall system selected be one that includes provisions for water drainage. The choices include Senturion® line of water drainage EIFS, commercial Senerflex® Channeled Adhesive or Channeled Insulation Design, Senergy Stucco Wall System, and Senergy Cement-Board Stucco™ Systems. There are no exceptions to this policy. Under no circumstances will BASF Wall Systems warrant the use of any other system on this type of construction without expressed written authorization from BASF Wall Systems [Residential construction using EIFS on masonry (CMU) or poured concrete does not require the additional water drainage provisions described above. Senergy Exterior Surfacing Systems for insulating concrete forms are also acceptable.] See the Senergy Residential Policy Bulletin for a more detailed discussion of this topic. Consult BASF Wall Systems Technical Services Department for specific recommendations concerning all other applications. Consult the Senergy website, www.senergy.basf.com for additional information about products and systems and for updated literature.

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