

PRODUCT DESCRIPTION

SU-310 is a premium Calcium Aluminate self-leveling underlayment for use prior to interior installation of resilient flooring materials. SU-310 can be used to smooth and flatten substrates to prevent telegraphing substrate imperfections through flooring materials. SU-310 will not sponsor mold or mildew growth, making it an ideal option for healthcare environments.

The SU-310 has a long working time while also offering low shrinkage and excellent leveling properties. The SU-310 can be barrel mixed or used in a pump, allowing flexible installation options. It can be installed from ¼" to 2" in total thickness without extending. SU-310 is walkable within 2 hours and can receive floor covering within 12 hours.

FEATURES

- **Bonds to Wide Variety of Substrates**
- **Pumpable**
- **Walkable Within 2 hours**
- **Exceptional Flow**
- **Low Shrinkage**
- **Self-Curing**
- **Can Be Installed Over Distressed Flooring**
- **Compatible With Most Cementitious Materials**

TECHNICAL INFORMATION

Unit Size: **50 lb. bag**
 VOC: **0.0 g/l**
 ASTM E84 - Flammability: **Passes**
 ASTM C109 - Compressive Strength: 4 Hours - **2000 PSI**
 ASTM C109 - Compressive Strength: 24 Hours - **4000 PSI**
 ASTM C109 - Compressive Strength: 28 Days - **5500 PSI**
 ASTM C348 - Flexural Strength: 28 Days - **>1100 PSI**
 ASTM C190 - Tensile Strength: 28 Days - **>570 PSI**
 ASTM C1584 - Bond Strength: 28 Days - **>400 PSI**
 ASTM C4541 - Pull Strength: 28 Days - **>375 PSI**
 LEED v2009 MR Credit 4.1 - 4.2: **Complies**
 LEED v2009 MR Credit 5.1 - 5.2: **Within 500 mi. of Bensalem, PA**
 LEED v2009 IEQ Credit 4.1: **Complies**
 Water Required: **5.5 qts per bag**
 Minimum Thickness: **1/4"**
 Maximum Unextended Thickness: **2"**
 Maximum Extended Thickness: **5"**
 Installed Weight / Sq. Ft.: **2.2 lbs. / ¼"**
 Mixing Time: **~2 Minutes**
 Flow Time: **20 Minutes**
 Initial Set: **60 Minutes**
 Light Foot Traffic Time: **1 - 2 Hours**
 Acrylic Adhesive Install Time: **12 Hours**
 Epoxy/Urethane Adhesive Install Time: **16 Hours**
 Shelf Life: **6 Months**
 Storage Temperature: **50° - 75° F**

SPREAD RATE CHART

UNDERLAYMENT THICKNESS	COVERAGE PER BAG	BAGS PER 100 SQ. FT.
1/4"	25 sq. ft.	4
3/8"	16.5 sq. ft.	6
1/2"	12.5 sq. ft.	8
5/8"	10 sq. ft.	10
3/4"	8 sq. ft.	12
7/8"	7 sq. ft.	14
1"	6 sq. ft.	16
1 1/2"	4 sq. ft.	24
2"	3 sq. ft.	32

PRODUCT LIMITATIONS

All referenced times are subject to substrate porosity and flatness, as well as ambient conditions, such as air temperature, relative humidity and substrate temperature - actual times may vary based on these conditions. Expansion joints must be honored. Do not use SU-310 to fill expansion joints, control cuts or dynamic cracks. Do not install materials over LVT, cushioned vinyl, cork, rubber, or asphaltic materials. Do not install patch in outdoor areas. Do not install in areas that may be subjected to heavy point loads. Do not use over materials containing asbestos.



1. PRE-INSTALLATION CHECKLIST

- Consult all associated product literature concerning installation and warranty prior to installation of moisture mitigation.
- Allow all trades to complete work prior to installation.
- Deliver all materials to the installation location in its original packaging with labels intact.
- Inspect all material to ensure there is no leakage or damage.
- Do not stack pallets to avoid damage.
- Ensure installation area and material storage temperatures are between 65° F (19° C) and 85° F (30° C) for at least 48 hours before, during and after installation.
- Ensure HVAC system is operational and fully functioning at normal operating conditions.
- Turn off radiant-heated flooring systems prior to installation and gradually increase the temperature after 48 hours from installation.
- Protect installation area from extreme temperature changes, such as heat and freezing, as well as direct sunlight for at least 48 hours before, during and after installation.
- Ensure all vents, walls, moldings and/or doorways are protected with tape or plastic prior to installation.
- Do not proceed with installation until all conditions have been met.

2. SUBSTRATE PREPARATION

All substrates must be clean, smooth, permanently dry, flat, and structurally sound. Substrates must be free of visible water or moisture, dust, sealers, paint, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, resinous compounds, solvents, wax, oil, grease, asphalt, gypsum compounds, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material or foreign matter.

CONCRETE SUBSTRATES

All concrete must be prepared in accordance with ASTM F710 and must be tested for moisture per the adhesive and/or flooring system instructions. If concrete moisture levels exceed the limits of the adhesive adhesive/flooring system or 90% RH per ASTM F2170, whichever is lowest, a moisture mitigation product, such as the Excelsior MM-100, must be installed. All concrete substrates must be clean and primed with the NP-230 prior to installing the SU-310.

Do not install self-leveling in below grade areas when hydrostatic pressure is visible or suspected.

RESINOUS SUBSTRATES

When installing directly over a resinous products, such as the MM-100 or an epoxy coating, ensure that coating is dry to the touch and has cured for the prescribed length of time. All resinous substrates must be primed with Excelsior NP-230 primer prior to installing the SU-310 underlayment.

GYPSUM BASED SUBSTRATES

Gypsum-based substrates must be sealed prior to applying a cementitious based product to avoid interactions between the two products. Gypsum substrates must have one coat of the Excelsior MM-100 installed to seal gypsum substrates and improve the strength of the substrate. Once coating with the MM-100, substrate must be primed with the Excelsior N-230 Primer and must have Excelsior FiberMat installed prior to installation. SU-310 must be installed at a minimum thickness of ¼" when installing over FiberMat.

WOOD SUBSTRATES

Wood substrates must be prepared in accordance with ASTM F1482. Wood substrates should be of double layer construction with a minimum thickness of 1". Crawl spaces beneath wood substrates shall be in compliance with local building ventilation codes and have at least 18" of cross-ventilated space between the ground and the joists. Wood joists should be spaced on not more than 16" centers.

Prior to installation, moisture retardant sheeting with a maximum rating of 1.0

perm must be installed beneath the wood subfloor, overlapped at least 8". For standard installations, use Underlayment Grade plywood, OSB or equivalent with a minimum thickness of 3/4" thick and a fully sanded surface. When floors may be subjected to moisture, use an APA approved exterior grade plywood.

Avoid preservative-treated and fire-retardant plywood, as some may be manufactured with resins or adhesives that may cause discoloration or staining.

Engineered wood flooring, must be solid, sound and dry and free of all dust, dirt, debris and loose materials.

Wood substrates must be primed with the Excelsior NP-230 Primer and must have Excelsior FiberMat installed prior to installation. SU-310 must be installed at a minimum thickness of ¼" when installing over FiberMat.

ADHESIVE RESIDUE SUBSTRATES

When installing SU-310 over substrates that have existing adhesive residues, ensure adhesive residues are thin, sound, non-water soluble, free of tack and well bonded. Ensure any and all patching compounds or repair products under existing adhesives are removed.

When dealing with cutback adhesives and materials that contain asbestos, follow all OSHA guidelines. Removal must be conducted using the wet-scrape method outlined in RFCI "Recommended Work Practices for the Removal of Resilient Floor Coverings". Ensure all federal, state, local and industry guidelines are followed.

Adhesive residues must have one coat of the Excelsior MM-100 installed to encapsulate substrate. Once coated with the MM-100, follow all Resinous Substrate guidelines.

EXISTING FLOORING SUBSTRATES

Existing rubber flooring and LVT must be completely removed from the substrate prior to installation.

All existing vinyl flooring materials, such as VAT, VCT or solid vinyl tile, as well as existing stone flooring materials, such as terrazzo, ceramic or other stone flooring materials, must be solidly adhered and all loose tiles must be removed prior to



installation. Ensure all glazed, sealed, smooth and/or shiny surfaces are properly sanded using 40-60 grit sandpaper or a 100 grit Diamabrush Prep Plus tool. Ensure surface is clean and dry prior to installation. All existing flooring substrates must be primed with Excelsior NP-230 primer prior to installing the SU-310 underlayment.

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Adhesive residues must have one coat of the Excelsior MM-100 installed to encapsulate substrate. Once coated with the MM-100, follow all Resinous Substrate guidelines.

DISTRESSED SUBSTRATES

Distressed substrates, such as mastic, cutback, mudbeds and lightweight concrete, must be solid, sound and dry and free of all dust, dirt, debris and loose materials. All distressed substrates must have one coat of the Excelsior MM-100 installed to encapsulate substrate. Once coated with the MM-100, the substrate must be primed with the Excelsior NNP-230 Primer and must have Excelsior FiberMat installed prior to installation. SU-310 must be installed at a minimum thickness of 1/4" when installing over FiberMat.

3. CRACKS, JOINTS & VOIDS

All cracks, joints and voids, as well as the areas surrounding them, must be clean and free of dust, dirt, debris and contaminants. All minor cracks and voids 3/64" wide or less may be repaired with a suitable cementitious patch.

Due to the dynamic nature of concrete

slabs, manufacturer **cannot** warranty installations to cover expansion joints, cracks or other voids (such as control cuts, saw joints and moving cracks or voids) wider than 3/64". Do not install flooring directly over any expansion joints or cracks wider than 3/64".

All expansion joints should have a suitable expansion joint covering system installed to allow expansion joint to freely move. To treat expansions joints where an expansion joint covering system can't be installed or to treat through cracks (depth at least 75% of the thickness of the concrete), chase joint or crack with a suitable saw or grinder and open to a minimum width of 1/4". Be sure to clean all dust, dirt and debris from crack. Joints and cracks should then be sealed with a suitable, elastomeric caulk (such as Ardex Ardiseal Rapid Plus, Mapei P1 SL or equivalent) designed for use in expansion joints. Install a closed-cell backer rod at prescribed depth and follow caulk manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

To treat other cracks and voids (such as control cuts, saw-cut joints and surface cracks) over 3/64" chase joint or void with a suitable saw or grinder and clean all dust, dirt and debris from crack. Fill entire crack with a rigid crack filler (such as Ardex Ardifix, CMP CM10 or equivalent) designed for use in control or saw-cut cuts. Follow material manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

Consult a structural engineer prior to treating any crack or joint, especially those that may affect structural integrity (such as expansion joints). Review all manufacturer installation instructions and/or consult manufacturer technical staff for all crack or joint filling products prior to treating joints and cracks.

4. MM-100 INSTALLATION

If ASTM F2170 or ASTM F1869 test results exceed the prescribed limits for the adhesive or flooring products to be installed over the SU-310, or if installing over gypsum, adhesive residue or a distressed subfloor, Excelsior MM-100

Moisture Mitigation must be installed prior to proceeding with installation. Install the MM-100 per technical data sheet at a rate of 400 sq. ft. per gallon. When installing over concrete as moisture mitigation, material must be applied in two coats. When installing over adhesive, gypsum or wood, the material must only be applied in one coat.

For more information about the MM-100 Moisture Mitigation product, please see the associated technical data sheet.

5. PRIMER INSTALLATION

All substrates must have the Excelsior NP-230 primer installed prior to the use of the SU-310. Ensure substrate is suitably prepared prior to installation, as manufacturer is not responsible for substrates that have not been properly prepared and tested for moisture.

Apply NP-230 directly to substrate using a 3/8" short nap paint roller at the prescribed coverage rate, ensuring thin, even coverage without pooling or puddling material. Avoid filling large divots and voids with NP-230, as this could affect drying time and performance. Allow NP-230 to fully dry prior to installing SU-310. Material should be clear, completely hardened and no longer tacky.

For more information about the NP-230 Primer, please see the associated technical data sheet.

6. FIBERMAT INSTALLATION

Prior to installing SU-310 over gypsum substrates, wood substrates or distressed substrates, the Excelsior FiberMat must be installed to improve flexural and tensile strength. Excelsior NP-230 must be installed and dry prior to installing FiberMat.

Loose lay FiberMat over substrate and cut to fit dimensions. Overlap each roll by a minimum of 1". Avoid dragging tools, equipment and mixing drums across FiberMat. When possible, use a dolly, wheelbarrow, Masonite or ram board to protect FiberMat and prevent tearing. SU-310 is installed directly over FiberMat - FiberMat will naturally separate and



disperse once worked into the SU-310. When installing over the FiberMat, use a roller handle/frame (without a roller) must be used to disperse fibers throughout underlayment.

For more information about the FiberMat, please see the associated technical data sheet.

7. PRODUCT INSTALLATION

Ensure substrate is suitably prepared prior to installation, as manufacturer is not responsible for substrates that have not been properly prepared and tested for moisture. Ensure NP-230 primer and FiberMat (when necessary) have been installed and are dry prior to installation. Use plastic athletic cleats or spike attachments for boots when installing self-leveling materials.

When mixing SU-310, mix two bags at a time with 5.5 quarts of water per bag (11 quarts total). Ensure dry goods are poured into water, not the other way around. Using a paddle mixing attachment and a heavy duty, high speed (>600 RPM) drill, mix the material for 2 minutes and ensure a homogenous, lump-free consistency is reached. Keep mixer submerged in material while mixing and until pouring to avoid entraining excess air. **Do not add any additional water.**

Once mixed, immediately pour material onto the substrate and spread using a spreader or gauge rake. When installing over the FiberMat, use a roller handle/frame (without a roller) to distribute fibers throughout material prior to finishing. Once material has been spread to the desired thickness, use a smoother or finishing tool to finish. Material will remain workable and will self-heal for ~20 minutes.

SU-310 will be walkable within 1-2 hours of installation. Avoid heavy use, rolling loads and point loads for at least 12 hours. To ensure material cures correctly, avoid

excessive air movement and direct sunlight for the first 24 hours.

8. ADHESIVE INSTALLATION

When using Excelsior Acrylic Adhesives (SP-500, AW-510, AP-520 & ESD-810) and Excelsior Specialty Adhesives (WB-600, EN-610, TP-620 & C-630), flooring may be installed after 30 minutes. Ensure that surface of CP-300 has completely hardened prior to installation.

When using Excelsior Urethane Adhesives (UW-700, EW-710), flooring may be installed after 12 hours. Ensure that surface of CP-300 has completely hardened prior to installation.

When SU-310 is installed in conjunction with the FiberMat, the surface of the material may appear rough. To smooth dried surfaces, sand with a low-speed buffer and 40-60 grit sandpaper or patch with the CP-300 prior to installing floor covering.

9. CLEAN-UP

Wet material can be cleaned with a clean towel or cloth and clean, potable water. Tools and materials where material has dried can be mechanically cleaned with clean, potable water and a wire brush, abrasive sponge or scraping tool.

FOR PROFESSIONAL USE ONLY. PLEASE CONSULT ALL ASSOCIATED TECHNICAL DATA SHEETS, SAFETY DATA SHEETS AND WARRANTY INFORMATION PRIOR TO INSTALLATION.