

### PRODUCT DESCRIPTION

AW-510 is an acrylic wet set adhesive used for the permanent installation of dimensionally stable vinyl, rubber and quartz flooring, wall base and stair tread products. AW-510 is water-based, low VOC and solvent free, yet is highly aggressive and has a high resistance to moisture and plasticizer migration.

AW-510 can be installed on porous substrates and is non-flammable, as well as water and alkali resistant and freeze thaw stable. Adhesive is suitable for heavy traffic or rolling loads and is easy to cleanup.

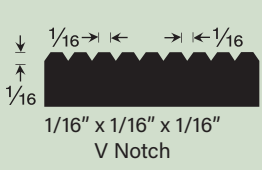
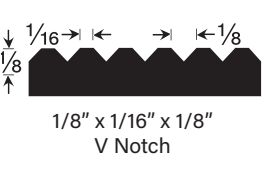
### FEATURES

- **Low VOC**
- **Water-Based**
- **Solvent Free**
- **Freeze-Thaw Stable**
- **FloorScore Certified**
- **Easy Installation**
- **Excellent Shear Strength**
- **Contributes to LEED Credits**

### TECHNICAL INFORMATION

Unit Size: **1 Gallon**  
**4 Gallons**  
 Weight: **12 lbs. (gallon)**  
**48 lbs. (4 gallons)**  
 VOC: **< 0.1 g/l**  
 LEED v2009 IEQ Credit 4.1: **Complies**  
 LEED v2009 MR Credit 5: **Within 500 mi. of Olive Branch, MS**  
 ASTM F2170 RH Limit: **90% RH**  
 ASTM F1869 MVER Limit: **6 lbs.**  
 ASTM F710 pH Limit: **7 - 10**  
 ASTM D7149 Freeze Thaw: **5 Cycles at 0° F**  
 Coverage Rate: **160 sq. ft. per gallon**  
 Flash Time: **5 - 10 minutes**  
 Working Time: **50 - 60 Minutes**  
 Light Foot Traffic: **24 Hours**  
 Heavy Foot Traffic: **48 Hours**  
 Heavy Rolling Loads: **72 Hours**  
 Heat Welding: **24 Hours**  
 Maintenance: **72 Hours**  
 Shelf Life: **1 Year**  
 Storage Temperature: **65° - 75° F**

### SPREAD RATE CHART

Material	Trowel Size	Coverage Per Gallon
Flooring & Stair Treads	 <p>1/16" x 1/16" x 1/16" V Notch</p>	160 sq. ft.
Wall Base	 <p>1/8" x 1/16" x 1/8" V Notch</p>	~240 sq. ft.

### PRODUCT LIMITATIONS

All referenced flash or working times and spread rates are subject to substrate porosity and flatness, as well as ambient conditions, such as air temperature, relative humidity and substrate temperature – actual times and spread rates may vary based on these conditions. Adhesive cannot resist dimensional instability of wall materials, which may cause gapping, cupping, buckling and/or edge lifting. Adhesive is not intended for use under areas that are subject to sustained heavy point loads or static loads. Do not use in outdoor installations or over existing resilient flooring products, non-porous substrates and existing adhesives or adhesive residues.

## 1. PRE-INSTALLATION CHECKLIST

- Consult all associated product literature concerning installation and warranty prior to installation.
- 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 materials 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) and 40% - 65% RH for at least 48 hours before, during and after installation.
- Ensure HVAC system is operational and fully functioning at normal operating conditions 48 hours prior to, during and 48 hours after 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 concrete moisture testing is conducted or scheduled to be conducted prior to flooring installation.
- Ensure all vents, walls, moldings and/or doorways are protected with tape or plastic prior to installation.
- Test substrate for porosity in order to determine the installation method necessary.
- Do not proceed with installation until all conditions have been met.

## 2. SUBSTRATE PREPARATION

All substrates must be prepared according to ASTM F710, as well as applicable ACI and RFCI guidelines. Substrates must be clean, smooth, permanently dry, flat, and structurally sound. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material or foreign matter.

All substrates must have any and all existing adhesives, materials, contaminants or bond-breakers mechanically removed via scraping, sanding, grinding or buffing with a 25 grit DiamaBrush Prep Plus tool prior to adhesive installation. In extreme situations, shotblasting may be required. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a flat vacuum attachment or damp mopped with clean, potable water to remove all surface dust. ***Sweeping without vacuuming or damp mopping will not be acceptable.***

All porous substrates must be tested per ASTM F3191 to confirm porosity. Use a pipette or equivalent to conduct three tests by

placing a .05 mL (1/4" wide) droplet of clean, potable water onto the surface. If the substrate absorbs water within 60 seconds, the substrate is considered porous. Conduct 3 tests for the first 3000 sq. ft. and one for each additional 2000 sq. ft., at least one per room. All other substrates that do not meet this requirement are considered non-porous. Ensure that all non-porous substrates are not contaminated with any aforementioned contaminants.

It is recommended that all substrates have a floor flatness of FF32 and/or a flatness tolerance of 1/8" in 6' or 3/16" in 10'. Substrates that do not meet this requirement should have a compatible cementitious patch (such as the Excelsior CP-300) or self-leveling underlayment (such as the Excelsior SU-310) installed to flatten the installation area.

Do not use solvent/citrus based adhesive removers prior to installation. Follow The Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesive", and all applicable local, state, federal and industry regulations and guidelines. When removing asbestos and asbestos containing materials, follow all applicable OSHA standards.

### CONCRETE SUBSTRATES

All concrete must have a minimum compressive strength of 3500 PSI and be prepared in accordance with ASTM F710. When flooring is being installed directly over concrete, concrete surfaces that have an ICRI Concrete Surface Profile (CSP) over 4 should be flattened with a self-leveling underlayment or a patch to prevent imperfections from telegraphing through flooring materials. On or below grade concrete must have a permanent, effective moisture vapor retarder installed below the slab. New or existing concrete substrates on all grade levels must be tested in accordance with ASTM F2170, using in situ Probes, to quantitatively determine the amount of relative humidity no more than one week prior to the installation.

In addition to ASTM F2170 Relative Humidity Testing, existing concrete that has previously had floor covering installed on all grade levels must be tested in accordance with ASTM F 1869, using Calcium Chloride test kits, to quantitatively determine the Moisture Vapor Emissions Rate (MVER) of the concrete.

If ASTM F2170 or ASTM F1869 test results exceed the prescribed limits, a moisture mitigation product, such as 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. Do not install flooring until moisture testing has been conducted per the appropriate standard and/or moisture mitigation has been installed and is dry to the touch. Do not install flooring in below grade areas when hydrostatic pressure is visible or suspected.

### RESINOUS SUBSTRATES

All resinous substrates, such as the Excelsior MM-100 or an epoxy coating, must have a compatible cementitious patch or underlayment installed over the substrate prior to installation.

### GYPHUM BASED SUBSTRATES

Gypsum-based substrates must have a minimum compressive strength of 3500 PSI. Gypsum substrates that do not meet this requirement may have one coat of the Excelsior MM-100 installed to improve the strength of substrate. Substrate must be structurally sound and firmly bonded to subfloor. Any cracked or fractured areas must be removed and repaired with a compatible patch or repair product. Follow instructions for installation over a gypsum substrate. New or existing gypsum substrates may require a sealant or primer. Follow all manufacturer's recommendations regarding preparation for resilient flooring installation.

### WOOD SUBSTRATES

Wood substrates must be prepared in accordance with ASTM F1482. Wood subfloors should be of double layer construction with a minimum thickness of 1". Crawl spaces beneath wood subfloors 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 with a minimum thickness of 1/4" thick and a fully sanded surface. When floors may be subjected to moisture, use an APA approved exterior grade plywood.

Other wood subfloor materials, such as OSB, lauan, particleboard, chipboard or cementitious tile backer boards, are not acceptable subfloors. Avoid preservative-treated and fire-retardant plywood, as some may be manufactured with resins or adhesives that may cause discoloration or staining of the flooring.

Wood subfloor deflection, movement, or instability will cause the flooring installations to release, buckle or become distorted. As such, do not use plastic or resin filler to patch cracks. Do not use cement or rosin coated nails and staples or solvent-based construction adhesives to adhere the plywood. Do not install on a sleeper system (wood subfloor system over concrete) or directly over Sturd-I-Floor panels.

### METAL SUBSTRATES

All metal substrates must have a compatible cementitious patch or underlayment installed over the substrate prior to installation.

### EXISTING FLOORING SUBSTRATES

Existing rubber flooring and LVT, as well as the adhesives used to install them, must be completely removed from the substrate prior to installation. All other existing flooring, adhesives or adhesive residue must be removed or have a compatible cementitious patch or underlayment installed over the substrate prior to installation. Existing hardwood flooring may also have suitable underlayment grade plywood installed over the flooring perpendicular to the direction of the wood flooring.

### RADIANT HEATING SUBSTRATES

When installing flooring over a substrate that contains a radiant heating system, ensure the radiant heat is turned off 48 hours prior to installation and remains off during the entire installation. 48 hours after installation, the radiant heat may be gradually increased over the course of 24 hours, until normal operating temperature is reached. Ensure the temperature of the radiant heating system does not exceed 85° F (29.5° C) and avoid making abrupt changes in radiant heating temperature.

### 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. FLOORING 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 adhesive is approved for use with flooring material and the proper trowel type and size is used, as manufacturer is not responsible for any

and all adhesion issues related to improper adhesive selection or usage. To determine correct trowel size, see chart on page 1.

Use a nail-down guide or equivalent visual aid along starting row to expedite wet-set installation. Spread adhesive using appropriate trowel size at a 60° angle, ensuring consistent coverage. Do not allow adhesive to puddle or pool. Replace trowels at recommended intervals to maintain proper trowel ridge and spread rate.

Allow adhesive to flash for 5-10 minute and protect area from dust, debris and contamination. Once flashed, install material into fresh adhesive within 60 minutes. Periodically lift material to ensure proper adhesive transfer - adhesive should cover 90% of tile. Pay close attention to open times to avoid adhesion issues.

**Do not work on material that is installed into wet adhesive, as this could displace adhesive.** When working off of material is not possible, use a kneeling board or equivalent to disperse weight evenly and prevent adhesive displacement. Immediately after installation, roll the flooring material with a 3 section, 100 lb., crossing in a perpendicular direction after initial roll. Use a hand roller in areas that cannot be reached with larger roller. Visually inspect installation to ensure that material has not shifted and that adhesive has not been squeezed out of joints or compressed onto surface.

## 5. WALL BASE INSTALLATION

Prior to installing wall base, ensure wall base material has been properly acclimated and that ambient conditions are within normal operational ranges. Ensure all wall base materials have been cleaned with a clean, damp cloth and denatured alcohol or equivalent solvent-based product prior to installation.

When troweling adhesive, apply adhesive using a 1/8" x 1/16" x 1/8" V notch trowel. When using a cartridge, use An Excelsior #186 Spreader Nozzle. When using the spreader nozzle on base 3" in width and below, turn the spreader nozzle at a 25° - 45° angle. When installed 3 1/2" - 6" width base, use one row of adhesive. When installing base 6 1/2" and wider, use two rows of adhesive. Do not apply adhesive within 1/4" of the top of the wall base, regardless of width, to prevent adhesive from oozing out.

Install all pre-formed factory corners first, using a piece of wall base to ensure proper height to match height of adjacent wall base. Install and position wall base onto substrate within 15 minutes of applying adhesive. Do not allow adhesive to dry or form a skin. Do not stretch wall base, or material could retract to original size, creating gaps. Periodically lift material to ensure proper adhesive transfer - adhesive should cover 90% of tile. Do not allow adhesive to dry or skin over. Adhesive that has dried or skinned over must be removed and reinstalled.

Immediately after installation, roll wall base in the direction of

the previously installed piece with a hand roller. Visually inspect installation to ensure that material has not shifted and that adhesive has not been squeezed out of the top, bottom or joints and compressed onto surface. Immediately remove any excess adhesive or adhesive residue.

## 6. CLEAN-UP

Wet adhesive or adhesive residue can be removed from flooring materials with a clean cloth and a solution of Excelsior NC-900 and clean, potable water. Tools and materials where adhesive has dried can be cleaned with a clean, damp cloth and denatured alcohol or equivalent solvent adhesive cleaner. **Do not apply solvents directly to flooring materials.**

## 7. WARRANTY

Manufacturer provides a 1 year material & labor warranty for all installations where adhesive is properly installed. See Excelsior adhesive warranty for more information.

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