

## PRODUCT DESCRIPTION

U-705 is a premium; water resistant, single component urethane adhesive used for the installation of resilient flooring products, athletic flooring including recycled or crumb rubber flooring products. U-705 is free of water, solvents and VOCs. With extremely high sheer strength it is the perfect choice for areas with heavy traffic and rolling loads.

U-705 can be installed over porous and non-porous substrates in indoor and outdoor applications, allowing for the installation of flooring materials in entrances or areas that are not temperature controlled.

## TECHNICAL INFORMATION

Unit Size:	<b>3 Gallon</b>
VOC:	<b>0.0 g/l</b>
ASTM F2170 – RH Limit:	<b>100% <i>in situ</i></b>
ASTM F1869 – MVER Limit:	<b>25 lbs. / 1000 sq. ft.</b>
ASTM F710 pH Limit:	<b>14</b>
Freeze Thaw Stable:	<b>Yes</b>
Coverage Rates and Trowel Sizes:	
Coverage Rate Porous:	<b>160 sq. ft. per gallon</b>
Trowel Size Porous:	<b>1/16" x 1/16" x 1/16" V Notch</b>
Coverage Rate Non-Porous:	<b>235 sq. ft. per gallon</b>
Trowel Size Non-Porous:	<b>1/32" x 1/16" x 1/32" U Notch</b>
<b>Athletic Flooring</b> Coverage and Trowel Size:	
Coverage Rate Porous:	<b>135 sq. ft. per gallon</b>
Trowel Size Porous:	<b>3/32" x 3/32" x 3/32" V Notch</b>
Coverage Non-Porous:	<b>160 sq. ft. per gallon</b>
Trowel Size Non-Porous:	<b>1/16" x 1/16" x 1/16" V Notch</b>
Flash Time Porous	<b>Immediate</b>
Flash Time Non-Porous	<b>Immediate</b>
Working Time:	<b>40 Minutes</b>
Light Foot Traffic:	<b>8 - 12 Hours</b>
Heavy Foot Traffic:	<b>24 Hours</b>
Heavy Rolling Loads:	<b>24 Hours</b>
Heat Welding:	<b>24 Hours</b>
Maintenance:	<b>24 Hours</b>
Shelf Life:	<b>1 Year from date of receipt</b>
Storage Temperature:	<b>50° - 85° F (10° - 29.5° C)</b>

Technical Documentation visit: [www.excelsiorproducts.net](http://www.excelsiorproducts.net) or send an e-mail to: [solutions@rhctechical.com](mailto:solutions@rhctechical.com)

Technical Support: [solutions@rhctechical.com](mailto:solutions@rhctechical.com)

## 1. PRODUCT LIMITATIONS

- Prior to acceptance of this document refer to website [www.excelsiorproducts.net](http://www.excelsiorproducts.net) to confirm that you have the most current revision.
- All referenced times are subject to substrate porosity and texture, as well as ambient conditions, such as air temperature, relative humidity and substrate temperature – actual times may vary based on these conditions.
- Adhesive cannot resist dimensional instability of flooring products, which may cause gapping, cupping, buckling and/or edge lifting.
- Do not use over existing resilient flooring products or adhesives.

## 2. 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 area 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 for the life of the 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 for the life of the 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.

## 3. SUBSTRATE PREPARATION

***In regards to substrate preparation when mechanical sanding, grinding, shot blasting and vacuuming always follow the Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesives", and all applicable local, state,***

### ***federal and OSHA requirements in regards to Asbestos and Silica containment regulations.***

All substrates must be prepared according to ASTM F710 or ASTM F1482, 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 DiamoBrush Prep Plus tool prior to adhesive installation. In extreme situations, shot-blasting 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 HEPA approved vacuum and flat vacuum attachment to remove all surface dust.

***Sweeping without vacuuming will not be acceptable.***

Do not use solvent/citrus based adhesive removers prior to installation.

### **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 smoothed with a self-leveling underlayment or a patch to prevent imperfections from telegraphing through flooring materials. 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 F1869, 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.

### **RESINOUS SUBSTRATES**

When installing directly over a resinous products, such as the Excelsior MM-100 or an epoxy coating, ensure that coating is dry to the touch and has cured for the prescribed length of time. Substrate must be clean, dry, sound and free of contaminates. Resinous substrates are considered non-porous – make sure adhesive can be used over non-porous substrates and

follow all installation instructions and flash times for non-porous substrates.

## **GYPSUM 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 top layer bonding strength of the substrate. Substrate must be structurally sound and firmly bonded to the subfloor below. 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 the substrate has a primer or sealer applied just prior to finished floor being installed. Follow all manufacturers' recommendations regarding preparation for resilient flooring installation.

## **WOOD SUBSTRATES**

Wood substrates must be prepared in accordance with ASTM F1482. 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". 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. This also includes plywood sheathing designed for long lasting exposure to exterior climates. These also could contain resins/waxes that could stain or be considered bond breakers. Always refer to those manufacturers recommendations. If the subfloor materials mentioned above are already installed or the wood substrate is old and not repairable, the use of multi-ply Underlayment Grade plywood at a minimum of ¼" thick with a fully sanded face will be required. 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. Only install over a properly constructed sleeper system (wood subfloor system over concrete, consult the technical department for further details) and do not install directly over Sturd-I-Floor panels.

## **METAL SUBSTRATES**

Metal substrates must be thoroughly sanded/grinded and cleaned of any residue, oil, rust and/or oxidation. Substrate must be smooth, flat and sound. Install flooring material within 12 hours after sanding/grinding to prevent re-oxidation. Excessive deflection in the metal floor can cause a bond failure between the adhesive and the metal substrate.

Metal substrates are considered non-porous – make sure adhesive can be used over non-porous substrates and follow all installation instructions and flash times for non-porous substrates.

## **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. Existing VCT, VAT, quartz tile, solid vinyl tile, sheet goods, hardwood flooring, asphaltic materials and existing adhesives or adhesive residue must have a compatible cementitious patch or underlayment installed over the substrate prior to installation. Existing hardwood flooring requires suitable underlayment grade plywood be installed over the substrate. Adhesive may be installed over existing stone flooring substrates, such as terrazzo, porcelain or ceramic tile. Ensure existing flooring is a single layer of material and that all materials are clean, dry, sound, solid, well adhered and free of site-applied finishes, waxes and/or contaminants. Any and all loose tiles must be removed and repaired or replaced. All grout lines and irregularities must be filled and troweled flush with a suitable primer and patch such as the Excelsior NP-230 and CP-300 to prevent telegraphing of the existing floor. All existing flooring substrates that are outside of flatness tolerances that cannot be repaired with the Excelsior CP-300 patch should be leveled with the SU-310 self-leveling underlayment to achieve a smooth, flat substrate. All existing flooring substrates must have any and all site-applied finishes and/or waxes completely removed prior to flooring installation in order to ensure a proper adhesive bond. For mechanical removal, use a low-speed buffer and 40-60 grit sandpaper. Properly prepared substrates should not have any remaining gloss or sheen. For chemical removal, ensure chemical treatments will not disrupt adhesion of the existing flooring to the substrate. Be sure to rinse the existing flooring adequately with clean, potable water to remove any and all chemicals from the surface of material. Do not install flooring until any moisture on, between or below existing flooring has completely dried. Ensure all dust, dirt and debris are removed prior to flooring installation.

## **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. The radiant heat may be turned on 48 hours after installation and the normal operating temperature should be increased gradually over the course of 24 hours. 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.

## 4. 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 and be repaired with a suitable cementitious patch. Due to the dynamic nature of concrete slabs, manufacturer **cannot** warranty installations over expansion joints, cracks or other voids such as control cuts saw joints and moving cracks. Do not install flooring or use adhesives directly over any expansion joints. All expansion joints should have a suitable expansion joint covering system installed to allow expansion joint to freely move.

## 5. 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 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. Ensure ambient humidity is at least 50% RH to ensure that adhesive will properly cure. To determine correct trowel size, see Technical Information on page 1.

Protect area from dust, debris and contamination. Use a nail-down guide or equivalent visual aid along starting row to expedite 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. Install material into fresh adhesive within 40 minutes. Periodically lift material to ensure proper adhesive transfer - adhesive should cover 90% of flooring. Pay close attention to open times to avoid adhesion issues;

this may require installing material in smaller sections, especially when installing sheet goods over porous substrates.

***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. roller, crossing in a perpendicular direction after initial roll. Use a hand roller in areas that cannot be reached with larger roller. Re-roll flooring 30-60 minutes after initial roll. Visually inspect installation to ensure that material has not shifted and that adhesive has not been squeezed out of joints or compressed onto surface. Adhesive can be easily removed if wet or dry.

**For outdoor application please contact Technical Services for specific recommendations**

## 6. CLEAN-UP

Wet adhesive or adhesive residue can be removed from flooring materials with a clean cloth and acetone. Adhesive that has dried on the surface of flooring materials can be mechanically removed with a plastic or rubber putty knife or equivalent. Tools and materials where adhesive has dried can be mechanically cleaned or cleaned with acetone.

## 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.

### PROFESSIONAL USE ONLY

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