



## Advanced Adhesive Technologies, Inc. AAT-420 Premium Vinyl Plank and LVT Adhesive Specification Sheet

AAT-420 Premium Vinyl Plank and LVT Adhesive is a uniquely formulated adhesive engineered specifically for installing solid vinyl plank and tile (LVT). It may also be used to install solid vinyl sheet flooring and rubber tile (up to 24" x 24"). AAT-420 is moisture and alkali resistant and forms a tenacious, permanent bond. AAT-420 can be used on all grade levels over concrete and approved wood sub-floors in the absence of excessive moisture and alkalinity. AAT-420 may also be used over certain nonporous sub-floors.

Our premium vinyl plank and tile adhesive, AAT-420, is solvent free, nonflammable, contains no carcinogens and is non-toxic. AAT-420 is freeze-thaw stable. Like all of our adhesives, AAT-420 is protected by the CleanGuard® two-stage antimicrobial. CleanGuard® is a specifically formulated broad-spectrum, anti-microbial agent that protects our adhesives and sealers from microorganisms, such as mold or mildew, in both the wet and dry states.

Sub-floors must be flat and structurally sound. The sub-floor should be flat within 3/16" in 10' or 1/8" in 6'. All paint, varnish, oil, wax, finishes and any other bond inhibiting substances must be removed. Smooth or glazed surfaces must be abraded. Repair all joints and cracks with latex-based portland cement underlayment. Concrete sub-floors must be properly prepared according to the recommended practices detailed in the document ASTM F-710-11. Never sand existing resilient flooring that could contain asbestos. Follow all Federal, State and Local regulations relating to the removal of in-place, asbestos containing material. Very porous sub-floors must be primed with AAT-570 Primer/Sealer.

AAT-420 Premium Vinyl Plank and LVT Adhesive can be used over the following sub-floors with a maximum moisture emission rate of 6lbs/1000 sq ft. /24 hours [ASTM F1869-10], a pH of 7.0-10.0 [ASTM F710-11], and a maximum *in situ* RH of 80% [ASTM F2170-09]:

- Concrete above, on or below grade
- APA rated plywood underlayment
- Properly prepared gypsum cement
- Existing non-cushion back resilient floors that are well bonded, sound, smooth, and free of waxes, finishes, cleaners and any other bond inhibiting substances.



**NOTE:** Particleboard and OSB are **not** recommended underlayments. Strip or plank wood flooring, particleboard and OSB sub-floors should be covered with an approved plywood underlayment (minimum thickness of 1/4"). Before beginning installations with flooring types or over sub-floors not listed contact AAT Technical Services for recommendations. While some Luan plywood panels are widely marketed as "underlayments", there are a variety of qualities and species sold as such. Some varieties present severe problems when used as underlayments. Frequent problems noted are discoloration, indentation, bond failure, and underlayment delamination. AAT will not warrant the adhesive when applied over Luan plywood. Regulations may require that existing flooring material or coatings be tested to determine the asbestos content. Refer to the instructions for removal and handling of resilient flooring published by the RFCI in the publication, *Recommended Work Practices for Removal of Resilient Floor Coverings*. The Resilient Floor Covering Institute may be reached thru their Website [www.rfci.org](http://www.rfci.org) or by calling 301-340-8580.

Typical Trowels and approximate coverage (depth x width x spacing):

Porous sub-floors: 1/16" x 1/16" x 1/16" U or □ notch trowel: 125-150 sq ft/gal

Non-porous sub-floors: 1/16" x 1/16" x 1/16" V notch trowel: 180-200 sq ft/gal

**Installation Recommendations:** The building should be completely enclosed. All outside doors and windows should be properly installed with latching mechanisms in place. Adequate ventilation should be available. The HVAC system for the building should be operational and provide a consistent temperature of 65-75°F (air and sub-floor) and humidity levels should be between 35-

55% for a minimum of 72 hours prior to the installation. These conditions must be maintained to ensure the long term success and performance of the installation.

1. Flooring and adhesive should be acclimated to the job site conditions for a minimum of 24 hours prior to the installation.
2. Be familiar with the recommendations and any special instructions from the flooring manufacturer before beginning the installation. Follow the flooring manufacturer's specific recommendations regarding seam sealing.
3. Refer to the information above for specific information regarding sub-floor preparation and site conditions.
4. When installing vinyl plank and tile (LVT) spread the adhesive with the appropriate trowel and allow the adhesive to dry to a clear, tacky state. Place the LVT or plank into the dry, pressure sensitive adhesive. Only spread as much adhesive as can be covered with the flooring in under six hours.<sup>1</sup>
5. For use with solid vinyl sheet flooring, spread the adhesive with the appropriate trowel and allow it to develop tack. DO NOT allow the adhesive to "skin-over" or dry. Place the flooring into the "wet-tacky" adhesive while the adhesive is still wet enough to transfer to the back of the flooring.
6. Roll the installed flooring with a 75-100lb, three-section roller. Rolling should take place immediately after the flooring is placed into the adhesive.
7. It is recommended to minimize traffic over the newly installed flooring for at least 24 hours after the installation has been completed. Do not wash or clean the floor for five days after completion of the installation. To replace furniture and appliances use plywood panels to protect the flooring.

**Specific Technical Data:**

- A. Base: Acrylic-Ester Emulsion
- B. Color: White
- C. Clean-up: Remove wet adhesive with water and mild soap solution. Use AAT-197 Adhesive Remover to remove dried adhesive. Dried adhesive may be more difficult to remove; therefore, take care to remove adhesive from the surface of the flooring before it dries. DO NOT apply the solvent directly to the flooring material.
- D. Packaging: 4 gallon pails and one gallon pails (4 per case)
- E. Shelf-Life: One year from date of manufacture in un-opened container when stored at 70°F.
- F. Freeze-Thaw Stable to 15°F. Stability and spread-ability can be affected if allowed to freeze. Frozen material should be allowed to thaw at room temperature. DO NOT agitate or stir while frozen.
- G. VOCs: 0 g/l (Calculated per Ca. Rule 1168)
- H. Not recommended for exterior installations.

**NOTE:** We recommend installers follow the guidelines set forth in the flooring manufacturer's specific recommendations. Before placing the flooring, the adhesive must be allowed an open or dwell time appropriate for the flooring product, jobsite and sub-floor conditions. <sup>1</sup>AAT-420 has an extended working time of up to six hours after the initial drying if the area is kept dust free. It is extremely important to maintain recommended notch depth, width and spacing. The proper notch depth is that which will produce adhesive ridges that affect a 100% transfer to both the substrate and the backing of the flooring to include the inner recesses of the texture of the back.



# MATERIAL SAFETY DATA SHEET

## NPCA HMIS

H = 1  
F = 0  
R = 0

Prepared by: Greg Wood

Date: June 1, 2005

## SECTION I

**Manufacturer's Name:** Advanced Adhesive Technologies, Inc.  
**Street Address:** 424 S. Spencer St. Dalton, GA. 30720  
**Emergency Telephone No.:** Chemtrec 1-800-424-9300  
**General Information No.:** 1-800-228-4583  
**Product Class:** Floor Covering Adhesive  
**Manufacturer's Code Identification:** AAT-420  
**Trade Name:** Premium Vinyl Tile and Plank Adhesive

## SECTION II — HAZARDOUS INGREDIENTS

None

## SECTION III — PHYSICAL DATA

**Boiling Range:** Greater than 212° F  
**Vapor Density:** Lighter than Air  
**Evaporation Rate:** Slower than Ether  
**Percent Volatile by Volume:** 40% ± 2%  
**VOC Emission:** 0 g/l (calculated per Ca. South Coast Rule 1168)

## SECTION IV — PHYSICAL DATA

**DOT Category:** Nonflammable  
**Flash Point:** N/A  
**LEL:** Not Known  
**Extinguishing Media:** Water mist, dry chemical, CO<sub>2</sub>, mechanical foam  
**Unusual Fire and Fighting Hazards:** Liquid adhesive will not ignite. Dried adhesive will ignite if heated over 150°C and or exposed to ignition source, producing CO, CO<sub>2</sub>, smoke and hydrocarbons.  
**Special Fire Fighting Procedures:** If dried adhesive ignites, use dry chemical, foam extinguishers, or a fog nozzle. For small fires, CO<sub>2</sub> extinguishers can be used. Use air mask when combating dried adhesive fires.

## SECTION V — HEALTH HAZARD DATA

**Threshold Limit Value:** Non-established  
**Effects of overexposure:** Wet-possible lightheadedness, nausea, and/or mild dermatitis could develop. Dry-None.  
**Emergency and First Aid Procedures:** Flush eyes with ample water. Wash skin with soap and water. If ingested, treat symptomatically and contact physician.

## SECTION VI — REACTIVITY DATA

**Stability:** Stable  
**Incompatibility:** (Materials to avoid)  
**Conditions to avoid:** Closed area with open container  
**Hazardous Decomposition Products:** None  
**Hazardous Polymerization:** Will not occur  
**Conditions to avoid:** Strong acids or oxidants, temperatures below 20°F

## SECTION VII — SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled:** Scoop up excess with shovel, wash remainder with water.  
**Waste Disposal Method:** Landfill or incinerate as per local and state regulations.

## SECTION VIII — SPECIAL PROTECTION INFORMATION

**Respiratory Protection:** None required with adequate ventilation.  
**Ventilation:** Open windows, exhaust fan, open air area  
**Protective Gloves:** May be desirable for people with sensitive skin.  
**Eye Protection:** Safety glasses or goggles.  
**Other Protective Equipment:** None required

## SECTION IX — SPECIAL PRECAUTIONS

**Precautions to be taken in handling and storing:** Store in a cool, dry place. Optimum storage temperature 70°F.  
**Other precautions:** Keep from freezing. Keep sealed when not in use.  
If frozen, allow adhesive to thaw at room temperature. DO NOT agitate or stir until adhesive is completely thawed.  
Shelf Life – One year from the date of manufactured in an unopened container.