

**Advanced Adhesive Technologies, Inc.**  
**Problemsolver® EW**  
**Engineered Wood Flooring Adhesive**  
**Specification Sheet**

**Problemsolver EW** is an *Advanced* emulsion formula for the installation of engineered wood flooring. The Problemsolver EW is a nonhazardous, VOC compliant wood flooring adhesive with zero VOC's (calculated). This adhesive can be used on most commonly found sub-floors and for all brands of engineered wood flooring designed for "glue-down" installations. The **Problemsolver EW** adhesive is fully warranted and its performance is guaranteed. The excellent re-bond characteristic helps to minimize call backs from "popping" or "hollow" spots. **Problemsolver EW** is formulated for use with pre-finished engineered plank or strip and parquet flooring (including foam-backed parquet). Problemsolver EW should not be used on flooring made from bamboo, Kempas or Teak wood.

Prior to the start of the installation the installer must determine that the job-site conditions meet or exceed all applicable standards of the wood flooring manufacturer and AAT. Installation of hardwood flooring should be one of the last jobs of any construction project. The sub-floor should be prepared according to the standards and practices set forth in the document ASTM F-710-08.

**Site Conditions:**

The building should be completely enclosed. All outside doors and windows should be properly installed with latching mechanisms in place.

Landscaping should be sufficiently completed to direct water away from the building. Gutters and downspouts should be in place.

All concrete, masonry, plastering, drywall, and other wet work should be completed and thoroughly dry prior to beginning the installation. Texturing and paint primer coats should be completed. Where possible the installation of the base molding should not take place until after the wood flooring has been installed.

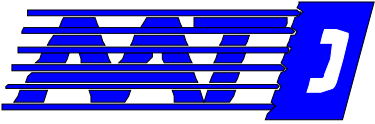
Adequate ventilation should be available. The HVAC system for the building should be operating for a minimum of 72 hours prior to the start of the installation. The flooring should not be exposed to extremes of temperature, humidity or moisture. The installation site should have a consistent air temperature of 65°F-95°F and relative humidity levels should be between 35%- 60% for a minimum of 72 hours prior to the start of the installation. The temperature of the sub-floor should be between 65°F-85°F. These conditions must be maintained to ensure long term success and performance of the wood flooring installation.

Basements and crawl spaces should be dry and adequately ventilated. Sub-floors must be checked for moisture content and emissions using industry accepted methods. Crawl spaces should meet local building codes regarding the minimum heights, cross ventilation and the use of vapor retarders.

Sub-floors must be free from dust, dirt, grease, wax, curing agents, sealers, oil and any other bond inhibiting substances. The sub-floor should be level within 3/16" in 10' or 1/8" in 6'. Moisture content of the sub-floor and the wood flooring should vary no more than 4%.

Concrete must dry with moisture emission rates that do not exceed 3 lbs. /1000 sq ft/24 hrs as measured by the Anhydrous Calcium Chloride Test (ASTM-F-1869-04). Lightweight concrete should be tested according to the requirements of ASTM-F2170. *In situ* relative humidity should not exceed 75%. Concrete surface pH is required to be 7-9.0. Before any moisture testing begins, the slab must be cured for a minimum of 30 days and the HVAC system must be operating for a minimum of 72 hours. Fill low areas with a polymer-modified portland cement leveling or patching compound. Leveling and patching compounds must be tested to ensure they are properly cured and within the manufacturer's specified requirements before proceeding with the installation. Mechanical surface profiling is the preferred sub-floor preparation method. Mechanically profile the sub-floor to medium-grit sandpaper texture. Sanding or scouring with open paper or a titanium disk is preferred. Remove curing and parting compounds and other surface hardeners and floor coatings by mechanically profiling, bead blasting or other similar means. Lightweight concrete and gypsum concrete must be primed with AAT-570 Acrylic Primer.

For Wood Joist Systems the sub-floor should be structurally sound, free of loose panels or boards, and free of protruding fasteners. Moisture content should be within industry standards for the areas average environmental conditions. Underlayment panels should be fastened according to the manufacturer's specifications. All panel seams should be sanded level and prepared according to the manufacturer's instructions. Sanded and other very porous substrates must be primed with AAT-570 Acrylic Primer. Minimum sub-flooring: 5/8" CDX plywood sub-



floor/underlayment (Exposure 1), maximum 16" o.c. construction. Install the flooring perpendicular to the floor joists. Do not install flooring over existing glue-down wood flooring or nailed down wood flooring that is wider than 3 1/4". Wide plank floors must be covered with an acceptable underlayment.

Engineered wood flooring may be installed over existing full spread sheet vinyl and vinyl tiles (non-embossed and non-cushion backed) if the existing flooring is well bonded. Clean the surface thoroughly and de-gloss the surface using an abrasive pad to create a suitable sub-floor. Resilient sub-floors must be free from dust, dirt, grease, wax, sealers, oils and any other bond inhibiting substances. These substances must be removed with the appropriate stripper/removers. Fill low areas with a polymer-modified Portland cement based patching or leveling compound. Leveling compounds must be tested to ensure they are properly cured and within the manufacturer's specified requirements before proceeding with the installation. Repair or replace loose flooring products before applying this adhesive. *Never sand any resilient flooring that may contain asbestos fibers.*

Engineered wood flooring may be installed over full spread, permanently bonded acoustic cork. Cork thickness should not exceed 1/4" (6mm) with a density between 11.4 and 13 lb. /cubic foot. Install cork in accordance with manufacturer's recommendations. Acoustic cork should be pure cork with a polyurethane binder.

Slabs with a radiant heating system are acceptable sub-floors for installing engineered wood floors with the following stipulations. The heating system should be fully operational for a minimum of seven days prior to the installation. The system should be shut down to allow the slab to cool down to room temperature before applying the adhesive. Immediately after completing the installation turn the system back on and set to normal temperature. The sub-floor cannot exceed 85°F throughout the life of the installation. Check with the system manufacturer to determine that the system is designed for the desired R-rating for wood flooring. Failure to ensure proper system design can result in excessive heat damage and wood shrinkage.

NOTE: Prior to the beginning of the installation the wood flooring, adhesive and sub-floor must be acclimated in an enclosed building with the HVAC operating for a minimum of 72 hours. Wood flooring must be exposed to the air when being acclimated.

**INSTALLATION:**

1. Follow wood flooring manufacturer's instructions for layout, requirements for expansion space and any special precautions for installation.
2. Apply adhesive with the recommended trowel. (See below) Allow approximately 10 minutes open time before placing wood flooring. Working time for adhesive is approximately 45 minutes. If sub-floor is non-porous a longer open time will be required.\* Temperature and relative humidity will determine the actual amount of open time needed and the adhesive's working time. A 100% adhesive transfer rate to the wood flooring is required.
3. A 100% adhesive transfer rate to the wood flooring is required. Occasionally lift a piece of flooring to assure that a 100% adhesive transfer is achieved. If proper transfer is not achieved, remove dried adhesive and re-apply the adhesive with the recommended trowel allowing the appropriate open time before proceeding. The use of non-transferring tape may be required to secure patterns and minimize movement until installation has been completed. Be sure to remove tape immediately after completion of the installation to avoid damaging the wood. Do not use masking tape.
4. Leave appropriate expansion around the perimeter of the room and at any stationary objects.
5. If plank is bowed or warped, use weights or nails to ensure flooring is in full contact with the adhesive during the adhesive curing process. Excessively bowed or warped planks should be culled prior to installing the flooring.
6. Roll completed installation with a 100lb. roller in a north-south direction and then in an east-west direction to ensure adequate seating into the adhesive.
7. Restrict all traffic from the floor for a minimum of 12 hours. Do not allow heavy traffic or placement of furniture for a minimum of 24 hours.
8. Remove wet adhesive with a damp cloth. If adhesive dries, remove the adhesive with AAT-197 Adhesive Remover. Test AAT-197 on a scrap piece of flooring to ensure solvent does not affect the floors finish.

**ENGINEERED PLANK**  
3/16" x 1/4" x 5/16" V notch  
50-60 sq. ft. /gal

**PARQUET** (Pre-finished, Foam-backed)  
1/8" X 1/8" X 1/8" Square notch  
80-100 sq. ft/gal

\*Determining whether the sub-floor is porous or non-porous is the responsibility of the user. You can check the sub-floor by placing two drops of water in several areas across the sub-floor. The sub-floor is porous if the water is absorbed within a few seconds. If the water beads and is not absorbed within a few seconds the sub-floor is non-porous.

# MATERIAL SAFETY DATA SHEET

## SECTION 1

### COMPANY INFORMATION

AAT, Inc.  
424 South Spencer Street  
Dalton, GA 30720  
Phone: 706-226-0610  
Fax: 706-278-6207

### MSDS INFORMATION

Prepared Date: June 13, 2008 (Replaces 06/03/08)  
Prepared By: Tim Brown

General Information: 1-800-228-4583  
Emergency Telephone Number: Chemtrec 1-800-424-9300

### PRODUCT INFORMATION

Product Name/Number: Problemsolver EW  
Product Description (product use): Advanced emulsion (Engineered Wood Flooring Adhesive)

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Unlisted ingredients are not 'hazardous' per the OSHA standard and/or are not found on the WHMIS ingredient disclosure list.

Chemical/CAS Number	Percent	OSHA STEL	Cal. OSHA STEL	ACGIH TLV
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N/A

## SECTION 3: HANDLING AND STORAGE

**HANDLING INFORMATION:** Wear appropriate protective equipment when working with this product.

**STORAGE INFORMATION:** Avoid temperature extremes in storage. Consult the Technical Data Sheet for specific storage instructions.

## SECTION 4: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Eye Protection:** Wear safety glasses to reduce the potential for eye contact; chemical safety goggles are appropriate if splashing or dusting is likely. Have eye washes available where eye contact can occur.

**Skin Protection:** Prevent prolonged or repeated contact by using rubber gloves and appropriate protective clothing. Launder contaminated clothing before reuse.

**Respiratory Protection:** Not normally required. Use NIOSH/MSHA approved respirator if conditions warrant.

**Ventilation:** General dilution ventilation.

## SECTION 5: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Paste
Color:	Light Tan
Odor:	Mild
Odor Threshold:	Not established
Specific Gravity:	1.18
% Volatile by Weight:	10-20
pH:	8.8-9.10
Boiling Range:	Greater than 200E F (93E C)
Freezing/Melting Point:	Freeze Thaw Stability 15-20EF
VOC:	11 g VOC/liter of material (VOC theoretically determined using EPA Publication 450/3-84-019)
VOC, less water:	12 g VOC/liter of material, less water and exempt solvents (VOC theoretically determined using EPA Publication 450/3-84-019)

## SECTION 6: STABILITY AND REACTIVITY DATA

**Stability:** Stable

**Incompatibility:** Not established

**Hazardous Decomposition:** Nitrogen compound, Sulfur compounds

**Hazardous Polymerization:** Will not occur

## SECTION 7: TOXICOLOGICAL INFORMATION

No data available

### **SECTION 8: ECOLOGICAL INFORMATION**

No data available

### **SECTION 9: DISPOSAL CONSIDERATIONS**

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

### **SECTION 10: TRANSPORTATION INFORMATION**

UNITED STATES DEPARTMENT OF TRANSPORTATION (DOT)

DOT Proper Shipping Name:	Adhesive, NMFC Item #4620, sub 5
DOT Hazard Class/I.D. Code:	None, None
DOT Label:	None
DOT Packaging Group:	None

It is our opinion that the information provided here may be used to transport this product in compliance with Canadian Transportation of Dangerous Goods.

### **SECTION 11: REGULATORY INFORMATION**

#### **FEDERAL**

Toxic Substances Control Act (TSCA)  
Section 8 (b) - Inventory Status

This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

#### **SARA TITLE III**

Section 313: This product does not contain regulated levels of any toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372.

#### **STATE REGULATIONS**

California Proposition 65: This product contains chemical(s) known to the state of California to cause cancer (c) or reproductive (r) damage.

Benzene - 71-43-2

New Jersey- RTK Label Information - Naphtha Solvent - 64742-89-8

WHMIS IDENTIFICATION/OTHER INTERNATIONAL REGULATIONS

### **SECTION 12: ADDITIONAL INFORMATION**

#### **HMIS RATING**

Health-1                      Flammability-0                      Reactivity-0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the AAT, Inc. from its suppliers, and because the AAT, Inc. has no control over the conditions of handling and use, the AAT, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the AAT, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the use of AAT, Inc. products to comply with all applicable federal, state and local laws and regulations.

### **SECTION 13: HAZARDS IDENTIFICATION**

#### **EMERGENCY OVERVIEW**

No specific warnings for normal use conditions.

#### **POTENTIAL HEALTH EFFECTS**

*Eyes:* Eye contact with liquid product will cause irritation.

*Skin:* Prolonged or repeated contact with liquid product may cause irritation.

*Inhalation:* Inhalation is not an anticipated route of exposure.

*Ingestion:* Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

*Chronic:* No anticipated chronic effects.

**REGULATED CARCINOGEN STATUS:**

This product is not listed as a carcinogen by NTP, IARC, ACGIH or OSHA.  
Existing Health Conditions Affected by Exposure: No known effects on other illnesses.

**SECTION 14: FIRST AID MEASURES**

*If in eye:* Flush immediately with water for 15 minutes. Consult a physician if irritation persists.

*If on skin:* Wash affected area with soap and water. Launder contaminated clothing before reuse.

*If vapors inhaled:* Remove subject to fresh air.

*If ingested:* If person can swallow, give one glass of water or milk. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

**SECTION 15: FIRE FIGHTING MEASURES**

**Flash Point/Method:** Non-flammable

**Upper Explosive Limit/Lower Explosive Limit:** Not applicable

**Autoignition Temperature:** Not applicable

**Appropriate Extinguishers:** Non-flammable in liquid state; use water spray, foam, dry chemical or carbon dioxide on dried product.

**Special Fire Fighting Procedures:** Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

**Unusual Fire and Explosion Hazards:** There is the possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.

**Hazardous Combustion Product:** Incomplete combustion can yield low molecular weight hydrocarbons, carbon monoxide, nitrogen compounds, sulfur compounds

**SECTION 16: ACCIDENTAL RELEASE MEASURES**

**Spill or Leak Procedures:** Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds or water systems.