



Technical Information #9

WOOD FLOOR ADHESIVES- WHICH ONE TO USE AND WHY?

SOLVENT BASED ADHESIVES: (e.g. Stauf WFR-930 SOLVA-MASTIC)

- This type adhesive is the industry's standard because of its lower cost, strongest bond, easy spread, easy clean-up, and strongest initial grab.
- Originally petroleum based solvents, it has been reformulated with an alcohol base that is safe for both the environment and for one's health, yet it retains all the desired features of the original.
- Alcohol based solvents lead the industry in having the strongest bond and shear strength to hold wood floors in place, especially during the normal seasonal changes to wood floors.
- It has the strongest initial grab of any adhesive because it cures as it evaporates, resulting in virtually no hollow spots and less scooting out of place that leaves gaps between boards.
- It works best with engineered flooring, but also can be used with quality solid wood floors.
- It has mold, mildew, and antimicrobial preventatives added to eliminate those problems.

URETHANE BASED ADHESIVES: (e.g. Stauf PUM-950 POWER-MASTIC)

- Urethanes replaced solvent based adhesives in the U.S. under an EPA mandate and when major U.S. manufacturers were unable to create a substitute for solvents.
- Urethanes are known for their strong bond and ability to stick to most any surface.
- Good quality urethanes are typically more costly than a solvent based adhesive. (NOTE: So called 'Acrylic Urethanes' are not Urethanes and do not have the same features. They are an acrylic or water-based adhesive.)
- Urethanes require moisture to cure, thus taking longer to grab and potentially having hollow spots and scooting out of place during installation.
- Most urethanes are extremely difficult to remove from any surface and will etch pre-finished wood floors if left on their surface (Stauf's PUM-950 will not etch- see container for details).
- Urethanes work equally well with engineered flooring and with quality solid wood floors.
- Urethanes are waterproof when cured, antimicrobial, and mold resistant.



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POLYMER BASED ADHESIVES (e.g. Stauf SMP-940 Superior and SMP-960 One-Step)

- The latest technology in wood floor adhesives, Polymers are designed to overcome the etching caused by typical urethane adhesives and their difficult clean-up and spreading; they are easily cleaned and spread.
- They require moisture to cure (like urethanes) and are thus subject to the longer cure time, slower initial grab, hollow spots, and scooting of boards during installation that is not an issue with solvents.
- Polymers are typically more costly than solvent or urethane based adhesives..
- Their unique formulation allows them to prevent moisture penetration from the sub floor when applied using specific installation techniques.
- Polymers work equally well with engineered wood flooring and quality solid wood floors.
- Polymers are waterproof when cured, antimicrobial, and mold resistant.

WATER BASED ADHESIVES: (e.g. Stauf M2A-900 ECO-MASTIC)

- Developed to meet environmental requirements that called for 'greener' adhesives and to reduce costs, they are typically the least costly of all types of wood floor adhesive
- Because water causes wood to expand, they can be a factor in cupping, bowing, end lifting, and finish degradation in wood floors when applied incorrectly or conditions are not dry and stable.
- Water based adhesives require longer time to grab and cure, and thus are subject to more hollow spots and to scooting of boards during installation.
- They are typically waterproof when cured and with mold and bacteria preventatives added to reduce those problems.
- Shear Strength of water based adhesives is more important than in all other types because it can vary from 150 to 650 PSI by manufacturer. Make sure the water based adhesive you choose has the highest shear strength possible (minimum 200 PSI) to insure long-lasting adhesion and performance.
- While some water based adhesives may 're-bond' if there is a hollow spot or dimensional change, this can only be temporary since the shear strength is not adequate to permanently hold any rigid floor product in place.

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