

Choose the Right Glue

With so many adhesives available, selecting the best one for your woodworking project can be puzzling. From polyvinyl acetate (PVA, aka yellow wood glue) to polyurethane to epoxy to hide glue, all of these choices bond wood to wood (and cloth, paper, and leather). But to find the *best* choice for your project, simply review the charts *below*, and then refer to the descriptions on the *next page* to make your decision.

If your project will not be exposed to moisture, use the top chart. For those that will get wet, use the bottom chart,

even if the project will be indoors. Then just cross-reference needed assembly time with the other listed criteria.

Quick Tip! A bottle of weatherproof or waterproof PVA may be all you need for most indoor and outdoor projects.

INDOOR ADHESIVES

ASSEMBLY TIME →		LESS THAN 5 MIN	10–15 MIN	20–25 MIN	60 MIN
BOND NEEDED	Permanent bond	Cyanoacrylate, No-drip PVA, Polyurethane hotmelt, 5-min epoxy	Standard PVA, Weatherproof PVA, Dark weatherproof PVA, Polyurethane	Extended-time PVA, Weatherproof extended-time PVA, Waterproof PVA	Structural epoxy
	Semi-permanent bond*	Traditional hide glue	n/a	Premixed hide glue	n/a

*Applying steam dissolves the glue for disassembly if needed.

MOISTURE-RESISTANT and MOISTURE-PROOF ADHESIVES

ASSEMBLY TIME →		LESS THAN 5 MIN	10–15 MIN	20–25 MIN	60 MIN
MOISTURE EXPOSURE	Occasional exposure	Polyurethane hotmelt, 5-min epoxy	Weatherproof PVA, Dark weatherproof PVA, Polyurethane	Weatherproof extended-time PVA, Waterproof PVA	Structural epoxy
	Frequent exposure	Polyurethane hotmelt, 5-min epoxy	Polyurethane	Waterproof PVA	Structural epoxy
	Submerged exposure	n/a	n/a	n/a	Structural epoxy

Bold indicates adhesive can be used on damp wood.

POLYVINYL ACETATE (PVA)

This general-purpose adhesive is great for interior projects that won't be exposed to moisture. Available almost everywhere, from department stores to lumberyards, it's also the most economical choice listed.

Clamp time: 30 minutes
Full-strength time: 24 hours



EXTENDED-TIME PVA

Sharing the same properties as regular PVA glue, this adhesive provides extra open time that makes assembly and clamping of complicated glue-ups easier.

Clamp time: 45 minutes
Full-strength time: 24 hours



NO-DRIP PVA

Designed for vertical woodworking applications, such as applying interior trim, this extra-thick PVA adhesive has fast initial tack—you can clamp pieces by hand for a few minutes—and won't run or drip.

Clamp time: 10 minutes
Full-strength time: 24 hours



WEATHERPROOF PVA

A good choice for use on exterior projects subjected to rain and snow, but not submerged. Works well for any interior project but especially those that may come into contact with food or water, such as bowls or cutting boards.

Clamp time: 30 minutes
Full-strength time: 24 hours



EXTENDED-TIME WEATHERPROOF PVA

This adhesive shares the same properties of standard weatherproof PVA, but the extra open time it provides eases assembly and clamping of complicated glue-ups.

Clamp time: 45 minutes
Full-strength time: 24 hours



DARK WEATHERPROOF PVA

Simply a dyed version of weatherproof PVA glue, the darker color of this adhesive helps hide squeeze-out on dark hardwoods, such as walnut and mahogany.

Clamp time: 30 minutes
Full-strength time: 24 hours



WATERPROOF PVA

Waterproof PVA meets the highest level of water resistance possible, including brief submersion, and costs less than most polyurethane or epoxy adhesives. It requires no mixing, and creates less mess than other waterproof adhesives. It's also perfectly suitable for projects that won't get wet.

Clamp time: 30 minutes
Full-strength time: 24 hours



POLYURETHANE

Because it requires moisture to cure, polyurethane works well with damp woods, such as treated lumber. If there's no moisture present, dampen one side of the joint before application. Squeeze-out expands and foams as it cures. Wear rubber gloves, as the glue turns black upon contact with skin and is difficult to remove.

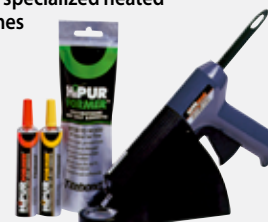
Clamp time: 60 minutes
Full-strength time: 24 hours



POLYURETHANE HOTMELT

Choose this adhesive for jobs requiring quick grab, such as when joining difficult-to-clamp parts. Requires a specialized heated applicator. It comes in both 30- and 60-second setup formulas.

Clamp time: 1–2 minutes
Full-strength time: 24 hours



HIDE GLUE

This adhesive has been used for centuries, making it ideal for period-exact repairs on antiques and musical instruments. Mix up a batch as needed by dissolving powdered glue in hot water. Because it stiffens as it cools, it requires a glue pot or other warming device. Cured bonds can be dissolved with warm water or steam.

Clamp time: 10 minutes
Full-strength time: 24 hours



PREMIXED HIDE GLUE

A ready-to-use liquid version of traditional hide glue, this adhesive can also be dissolved with steam or warm water after it cures so that joints can be disassembled. But because it doesn't need to be mixed or heated, it's more convenient to use.

Clamp time: 60 minutes
Full-strength time: 24 hours



STRUCTURAL EPOXY

Two parts—resin and hardener—must be mixed before use. It fills gaps, and is ideal for joints that will be completely submerged (boat builders use it), and for joints requiring extreme strength. This is one of your most expensive options.

Clamp time: 24 hours
Full-strength time: 7 days



5-MINUTE EPOXY

Fast grab makes this a good choice for hard-to-clamp assemblies. It bonds oily woods, such as teak, and works great for end-grain joints or filling gaps, but is not as strong as its sibling, structural epoxy. It is second only to cyanoacrylate in cost per ounce, so for small jobs, choose the two-chambered syringe dispenser.

Clamp time: 5–20 minutes
Full-strength time: 24 hours



CYANOACRYLATE

Ounce for ounce, this most expensive of the listed adhesives is also known as instant glue or CA. Find it in thick, medium, and thin formulas. Thin formulas wick into small crevices, while thick can fill small gaps. Spritz on an accelerant (typically sold alongside the adhesive) for an almost instantaneous set. The brittle bond can be broken with a sharp sideways blow, making this adhesive useful for temporarily attaching parts. Its quick grab can help hold a piece in position while a second, stronger adhesive cures.

Clamp time: <1 minute
Full-strength time: 24 hours

