

How to Tame

BY HENDRIK VARJU

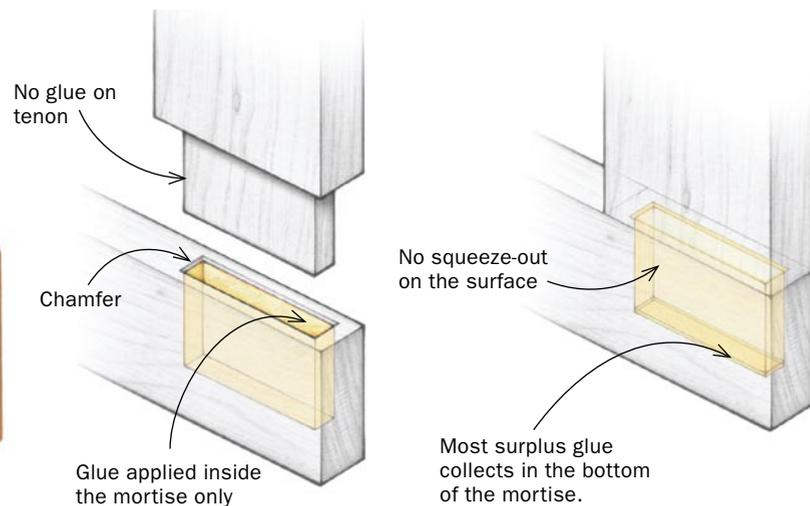
Every woodworker experiences that moment of pleasure when the first coat of finish brings out the beauty of the wood, only to be dismayed when the finish also reveals an area contaminated by glue squeeze-out. There is plenty of advice out there on how to remove squeeze-out, but as the saying goes, an ounce of prevention is worth a pound of cure.

The first step is to control the amount of glue you use. Less glue doesn't have to mean less strength, but it does mean less squeeze-out. The second step is to apply the glue to the right parts of a joint. If you follow both of these rules, squeeze-out will be either hidden inside the joint or directed to a place where it can be easily removed, such as the outside of a box that still needs planing or sanding rather than

Hide glue inside the joint...

The best way to avoid squeeze-out is to push surplus glue inward, hiding it in empty areas inside the joint.

RIGHT



WRONG

If you spread glue on the tenon, it will be forced upward by the edges of the mortise and will squeeze out around the joint, where it is hard to remove completely.



Squeeze-out



a finished inside corner, where a chisel might leave marks and a wet rag will leave behind a thin film of glue.

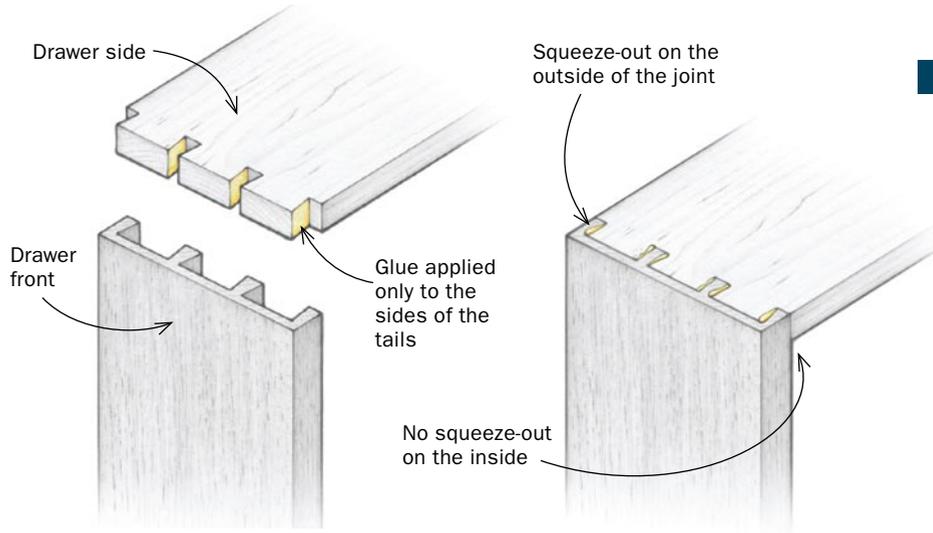
With most white or yellow woodworking glues, it is important that both surfaces are wetted by the glue within a short time. The normal method is to apply glue to both surfaces, but the downside on most joints is unavoidable squeeze-out. However, you can apply glue to just one side of the joint

if you use enough glue to wet the second piece. Just don't let more than a few minutes pass between applying glue and assembling the joint, because skinned-over glue cannot penetrate the second side sufficiently. As long as your joinery goes together quickly, you're fine.

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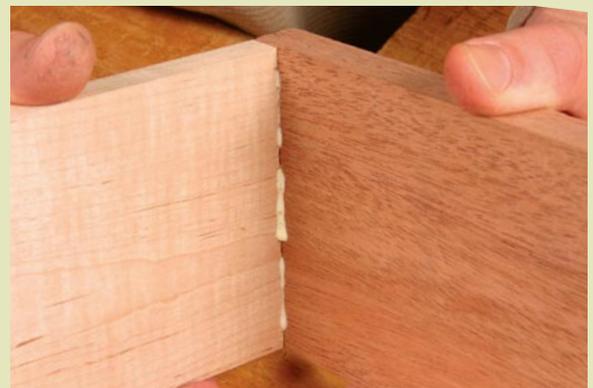
...or send it where it's easy to handle

If the design of a joint prevents you from hiding surplus glue inside it, the next best solution is to direct squeeze-out to the part of the joint where it can most easily be removed. In most cases, this is the outside surfaces rather than an inside corner.



WRONG

If you glue the pins, surplus glue will squeeze out on the inside corner of the joint, where it is hard to remove cleanly.



4 ways to hide it

Hide surplus glue inside a joint and you can eliminate the problem of squeeze-out entirely. This technique works with mortise-and-tenon joints, dowels, and certain types of spline joints and dadoes. Apply the glue to one surface only and keep it off end grain, where it soaks in and adds little to joint strength.

1

Stop squeeze-out on mortise-and-tenon joints

Cut the mortise a minimum of $\frac{1}{16}$ in. deeper than the length of the tenon to provide a small void where the surplus glue can collect. Put glue in the mortise only and spread it with a thin dowel (below right). If you can see the wood clearly, you need more glue. If there is a huge puddle at the bottom, push the dowel to the bottom of the hole, pick up some of the glue, and wipe it off with a rag.

Extra line of defense. A small chamfer around the top of the mortise will catch any surplus glue not held at the bottom.



2

Trap glue in dowel holes

As with the mortise-and-tenon joint, drill dowel holes a little over $\frac{1}{16}$ in. deeper than necessary. Apply glue on the inside of the hole only, just below the surface. In a typical joint, where end grain meets face grain, don't apply any glue between the mating surfaces themselves—only in the dowel holes.



Glue holes, not dowels. Use a smaller-diameter dowel rod to spread the glue around the sides of the holes.

TIP

HOW TO INSERT DOWELS TO THE RIGHT DEPTH

To avoid having the dowel bottom out on one side, forcing glue up and out of the hole, take a piece of scrap the same thickness as the amount of dowel you want to protrude from the hole, and place it next to the dowel as you tap it in with a hammer.



Insert dowels. If some glue squeezes out of the hole, wipe it away before the joint is assembled.



No squeeze-out. By eliminating squeeze-out, Varju saves time and ensures a perfect-looking joint.

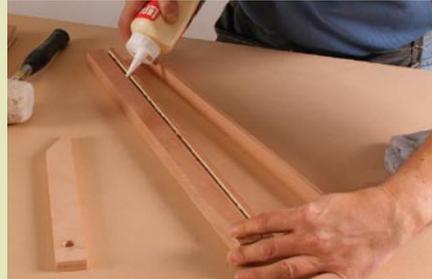
3

No-mess solid edging

Splines reinforce the joint between solid edging and plywood, whether for shelves or tabletops. Cut the spline grooves about $\frac{1}{16}$ in. deeper than needed and apply glue only in the groove, not on the spline. The space at the bottom of the groove will catch squeeze-out. For extra strength, apply a very thin film of glue to the inside face of the edging.



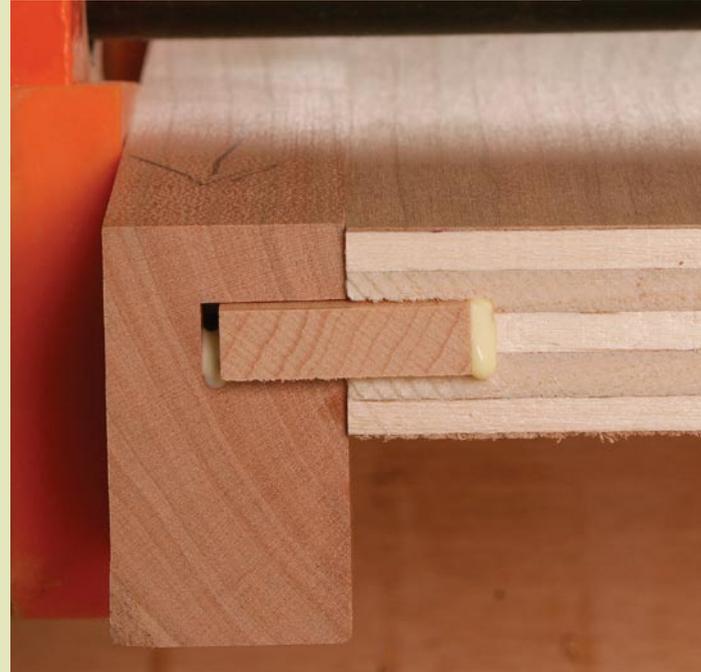
Insert the tenon. Place the unglued tenon into the mortise and drive it home (left). Surplus glue is forced downward and out of sight, leaving the outside of the joint glue-free (above).



Glue the groove. A spline adds strength when attaching solid edging. Apply glue to the groove only, not the spline.



Tap in the spline. Leave the spline $\frac{1}{16}$ in. above the bottom of the groove by using a piece of scrapwood as a depth stop.



No squeeze-out. Surplus glue collects in the reservoirs at the bottom of each groove, leaving the outside of the joint clean.

4

Strong but clean dado joints

With a dado joint, such as where a shelf fits into a bookcase side, you can't use extra depth to hold excess glue. But small chamfers on the ends of the shelf can provide a small reservoir. Just be sure to avoid chamfering the front corners unless they will be concealed by a face frame or a stopped dado.



Create a hiding place. Chamfering the ends of the shelves creates a small void for surplus glue.



Glue the dado only. Place a small bead of glue along the center and brush it over the bottom and sides.



No squeeze-out. By applying a limited amount of glue, and only to the dado, surplus glue is confined to the chamfers.

3 ways to direct it

If you can't hide squeeze-out, think where it would be easiest to remove. On the outside of a box or drawer carcass there is usually more hand-planing and sanding to be done, which also removes the squeeze-out.

1

Squeegee the squeeze-out in a rabbet

Often one part of a simple rabbet joint is inside a case while the other is outside, where it is far better to have squeeze-out. Apply glue to the rabbeted part only, and then hold the inside surfaces of the joint tightly together while assembling it. The glue will be pushed toward the outside of the case, not the inside corner.



Just the rabbet. Spread glue thinly on both faces of the rabbet, but not on the mating piece.



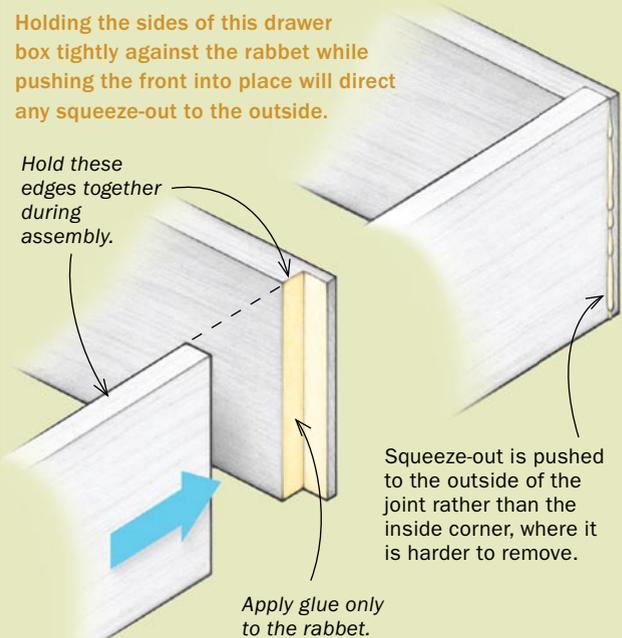
An extra precaution. If you get glue near what will become the inside corner of the joint, wipe it away before assembling the joint.



CAREFUL PRESSURE

Holding the sides of this drawer box tightly against the rabbet while pushing the front into place will direct any squeeze-out to the outside.

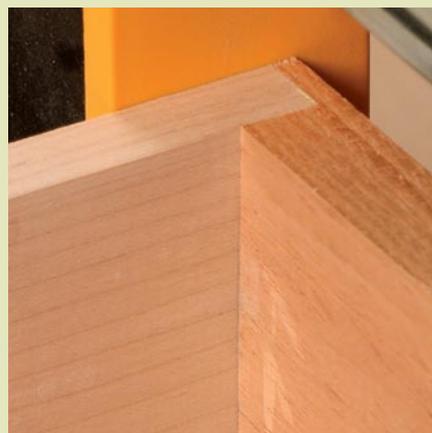
Hold these edges together during assembly.



Squeeze-out is pushed to the outside of the joint rather than the inside corner, where it is harder to remove.

Apply glue only to the rabbet.

Easy cleanup. The outsides of the drawer will be planed or sanded to fit the drawer opening, removing any squeeze-out or glue film at the same time.

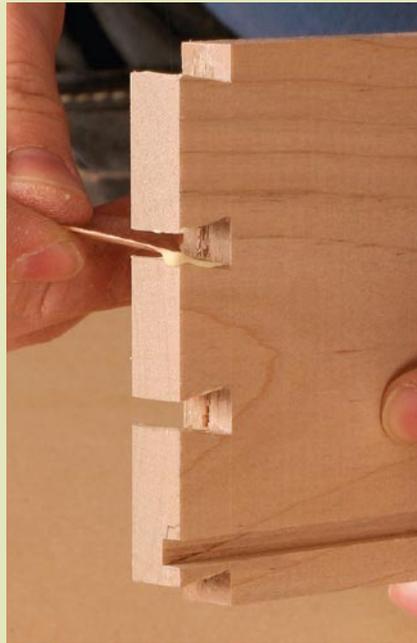


Nothing inside. The inside of the drawer is already completed, so any squeeze-out here would mean more work.

2

Glue specific parts of dovetails

Because the tails are pressed onto the pins, glue only the tails, whether they are through- or half-blind dovetails. That will push excess glue up toward the outside of the box. Any glue placed on the pins would get pushed down and into the inside corner. Because glue adds strength on long-grain surfaces only, glue on the ends of the tails of half-blind dovetails adds little strength and only causes squeeze-out. Worse, glue applied on the end-grain surface at the base of the pins (inside the sockets) is squeezed toward the inside corner of the box.



Tails, you win. Use a sliver of wood to apply glue just to the sides of each tail (above). Assembling the joint forces surplus glue to the outside (right), where it will be removed easily later.



Just like dovetails. Designate two opposite sides of a finger-jointed box as having tails and the other two sides as having pins. Then apply glue just to the "tails."

3

Same thing for finger joints

Think of a finger joint as a dovetail and assemble it in the same way. For a small box, pretend that the front and back have tails and the sides have pins. Put the glue only on the long-grain surfaces of the "tails" and slide those parts directly into the "pins." Not a single drop of glue will make it to the inside. Like dovetails, finger joints are usually designed to need planing and sanding to level the outside surfaces, so you'll get rid of the glue squeeze-out at that time.



Push straight down. As with the dovetails, push the glued part of the joint onto the dry one to force surplus glue to the outside of the joint.