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OCCURRENCE AND REMOVAL OF GLUE STAINS

Casein and vegetable glues containing caustic soda produce stains on certain kinds of wood, notably the oaks, maple, cherry, elm, ash, birch, and beech. Some glues stain the wood more than others, and those that contain the most alkali are likely to be most injurious. The staining is due to the action of the alkali in the glue on the tannins and other constituents of the wood, whereby a substance related to ink is formed. No means have yet been found of preventing this chemical action. Precautions can be taken however, the Forest Products Laboratory believes, which will keep the discoloration from the finished surfaces.

The most trouble with glue stain in woodworking is caused by the penetration of the glue solution through thin face veneers. This seepage is very likely to occur if the veneer is less than 1/20 inch thick and somewhat porous. The consistency of a glue in part determines whether it will be squeezed through the wood or not. It is quite obvious that under similar conditions a thin glue will penetrate farther than a thick glue. For this reason the quantity of water that is added to a glue might be diminished and "fillers" added when staining is feared. The amount of pressure applied to the panels in the press is also a factor, but it would not be advisable to reduce the pressure to such an extent as to stop the flow of the glue.

If a panel is dried promptly, the caustic-soda solution will have difficulty in coming to the surface. Rapid drying can be brought about by removing the panels from the press as soon as it is safe to do so, and placing them on stickers. The amount of staining can also be decreased somewhat by placing dry absorbent cauls between adjacent panels in the press.

Casein and vegetable glue stains can be almost entirely removed by sponging the stained surface with an oxalic-acid solution, prepared by dissolving 1 ounce of oxalic-acid crystals in about 12 ounces of water. Still better results may sometimes be obtained by moistening the wood first with a sodium-sulphite solution made up in the same concentration as the oxalic acid. In this way very stubborn stains can be almost obliterated. The acid must be thoroughly removed from the wood afterwards or it may affect the finish.