

TECHNICAL NOTES ^{A13005-F17}

FOREST PRODUCTS LABORATORY

U. S. FOREST SERVICE

MADISON, WISCONSIN

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GLUING WOOD COATED WITH VARNISH OR SHELLAC

Glue joints between wood surfaces which have been coated with shellac or varnish have low or very erratic strength. This has been thoroughly demonstrated by a recent test at the Forest Products Laboratory, Madison, Wis. Sixty pairs of test blocks were prepared in which one or both wood surfaces were varnished or shellacked and were joined with either casein or animal glue. A great many of these blocks fell apart before testing, and all which held together long enough to be tested sheared apart in the glue joint and not in the wood.

The highest strength value obtained was 1712 pounds per square inch, which is low for casein glue. The other values were 1000 pounds per square inch or less. It is evident, therefore, that all shellac or varnish should be carefully cleaned from wood which is to be glued, if high strength is desired.

A few blocks were joined using shellac as a glue over surfaces previously coated with shellac. The maximum shear strength obtained was 1425 pounds, the minimum 450 pounds, and the average 758 pounds per square inch. These values are low and do not indicate that shellac has gluing properties which compare favorably with casein or animal glue.