

# TECHNICAL NOTES

A13005-F26

FOREST PRODUCTS LABORATORY

U. S. FOREST SERVICE

MADISON, WISCONSIN

LO-11  
350

No. F-26.

## TESTS FOR WATER RESISTANCE OF PLYWOOD

A simple water-resistance test for the use of manufacturers of water-resistant plywood is the one developed in the early experiments with this material at the Forest Products Laboratory, Madison, Wisconsin.

Test specimens 5 inches square are sawed out of the sample so that they are at least one inch from the edge of the panel. A specimen is placed in boiling water for 8 hours, and upon examination at the end of that time should show no separation of the plies. A more prolonged test is made by the immersion of a specimen in running cold water. The soaking is continued for 10 days, during which time there should be no separation of the plies.

For an actual strength test of boiled or soaked plywood, a specially cut specimen and a testing machine are required. Descriptions of these may be obtained by addressing the Director of the laboratory.

Plywood grades for Navy aircraft panels have been established which require specimens tested for water resistance to exhibit a generous percentage of their dry shearing strength. The prescribed values are as follows:

|   | GRADE A PLYWOOD                                |   |                         |
|---|--|---|-------------------------|
|   | With cores<br>1/16" or<br>less in<br>thickness | With cores<br>over 1/16"<br>in thick-<br>ness | GRADE<br>B PLY-<br>WOOD |
|   | Pounds per square inch                         |   |                         |
| Tested dry  | 325  | 300   | 225                     |
| Tested wet after 10 days soaking:<br>in water at room temperature | 200  | 180   | 90                      |
| Tested while wet, after 8 hours<br>boiling in water               | 200  | 180   | 65                      |

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