

TECHNICAL NOTE NUMBER D-5

FOREST PRODUCTS LABORATORY - U. S. FOREST SERVICE - MADISON, WISCONSIN

CORRECT MOISTURE CONTENT OF LUMBER

All wooden products in which swelling, shrinking, warping, checking, and opening of glue joints are troublesome should be manufactured at the moisture content and under atmospheric conditions corresponding to the average for the region in which they are to be used.

Given the average temperature and humidity of any region, as shown by the Weather Bureau records, it is possible to determine the moisture content of wood corresponding to these conditions. Wood dried to this moisture content will undergo the least possible amount of shrinking, swelling, and warping in that particular region.

The following table, compiled by the Forest Products Laboratory, shows the moisture content in wood corresponding to various temperatures and humidities:

Relative humidity of air	Moisture content of air-dry wood			
	At 70° F.	At 140° F.	At 212° F.	
Per cent	Per cent	Per cent	Per cent	
20	4.5	3.3	2.2	
30	6.0	4.5	2.9	
40	7.7	5.9	3.9	
50	9.3	7.1	4.9	
60	11.2	8.8	6.2	
70	13.5	10.7	8.0	
80	17.0	14.0	10.5	
90	22.2	18.2	14.0	
100	32.0	26.2	21.0	