A SPECIFIC GRAVITY CHART FOR LARGE-SIZED THIN PLYWOOD PANELS

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A SPECIFIC GRAVITY CHART FOR LARGE-SIZED THIN PLYWOOD PANELS

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The accompanying chart provides a simple means of determining directly the specific gravity of large-sized thin plywood panels by the elimination of most of the mathematics concerned therewith, particularly when panels of uniform surface area are involved. The plywood should be in an oven-dry condition or at 10 percent moisture content in order to use this chart directly, although the specific gravity of plywood at other values of moisture content can be determined by interpolation or extrapolation.

Before referring to the chart, obtain the weight of the plywood in pounds and ounces and its average thickness in inches to the thousandth of an inch; then compute the surface area in square inches. With these data, refer to the chart as follows:

1. On the vertical scale to the left of the chart, locate the line representing the weight of the plywood and follow this line horizontally to its point of intersection with a vertical line representing the thickness of the plywood panel as read on the horizontal scale above the left-hand portion of the chart.

2. Note the position of this point with reference to the oblique lines and follow this relative position along the oblique lines to its intersection with a vertical line representing the area of the plywood in square inches (length X width) as read on the horizontal scale above the right-hand portion of the chart.

3. From this point of intersection follow horizontally to the right-hand margin of the chart and read the specific gravity of the plywood on the proper vertical specific gravity scale.

Two specific gravity scales have been provided. The first scale is to be used when the plywood has been weighed and measured in the oven-dry condition, and reads in specific gravity values based on weight and volume when oven dry. It has been found that plywood that has been pressed in a hot press at approximately 300° F. is practically oven dry about 30 seconds after

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1This report is one of a series of progress reports prepared by the Forest Products Laboratory to further the Nation's war effort. Results here reported are preliminary and may be revised as additional data become available.

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removal from the press if a normal pressing schedule has been used and if
the plywood is 0.200 inch in thickness or less. Under these circumstances
the oven-dry scale may be used to determine specific gravity values of ply-
wood directly as it comes from the press. The second scale, to be used when
the plywood has been weighed and measured at 10 percent moisture content,
also reads directly in specific gravity values based on weight and volume
when oven dry.

For moisture contents between the oven-dry condition and 10 percent
moisture content, interpolate between the oven-dry and the 10 percent mois-
ture content scales shown. For moisture contents between 10 percent and 15
percent extrapolate beyond these two scales.