

Material Tests

- **BM1 - Balanced Material**

- The purpose of this test method is to document the flatness and warp qualities of balancing panel materials when exposed to high humidity conditions.
- What's Included
 - Specimen
 - Two specimens shall be provided for testing:
 - One specimen shall be edgebanded on all 4 edges.
 - One specimen shall have no edgebanding, with exposed core on all 4 edges
 - The test specimen shall be 610 mm x 610 mm [24" x 24"] (+/- 6.4 mm [.250"]) and protected from light.
 - Test specimen shall be nominal 19.1 mm [.750"] thick.
 - Any additives (e.g. primers or bonding agents) applied to the test specimen shall be disclosed prior to testing.
 - Check In
 - Specimen is unloaded from delivery truck, unpacked, and reviewed for damage
 - Specimen is labeled with identification label for test process
 - Specimen is photographed for record
 - Specimen is placed in Acclimation Room for 72 hours
 - Test
 - Specimen's equilibrium moisture content shall be measured prior to conditioning.
 - Test specimens shall be acclimated in the environmental chamber for no less than 336 hours after date of arrival. Environmental humidity requirements shall be 45 percent relative humidity throughout the duration of the conditioning period. Environmental temperature requirements shall be 75 degrees Fahrenheit throughout the duration of the conditioning period.
 - Pre-test measurements shall be taken after conditioning is complete.
 - All test measurements shall be taken from the same face of the test specimen (See Figure 101)
 - Measurements shall be taken at each of four axes of the specimen:
 - A. Bottom left corner to top right corner
 - B. Top left corner to bottom right corner
 - C. Center top to center bottom
 - D. Center left to center right
 - Deviations in flatness and warp of test specimen shall be measured on each of the four axes at the point of the largest observable deflection across each of the four axes.

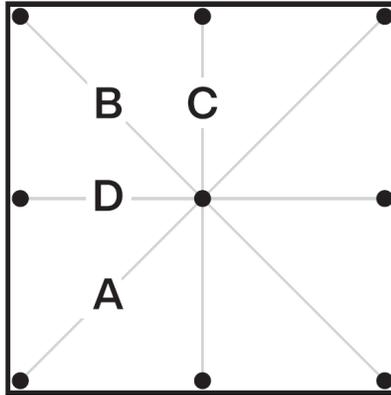


Figure 101

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- **Step 1**
 - Suspend test specimen(s) vertically in the environmental chamber. Specimens shall be situated a minimum distance of 6.4 mm [.250"] apart.
 - Raise relative humidity of environmental chamber to 70 percent. Maintain temperature of environmental chamber at 75 degrees Fahrenheit.
 - Temperature and relative humidity shall remain consistent within environmental chamber for 336 hours.
- **Step 2**
 - Remove test specimen from the environmental chamber and measure for deviations in flatness and warp along each of the four axes:
 - Bottom left corner to top right corner
 - Top left corner to bottom right corner
 - Center top to center bottom
 - Center left to center right
 - Deviations in flatness and warp of test specimen shall be measured on each of the four axes at the point of the largest observable deflection across each of the four axes.
 - Measurements shall be taken within one hour of each panel's removal from the environmental chamber.
- **Step 3**
 - Suspend test specimen(s) vertically in the environmental chamber. Specimens shall be situated a minimum distance of 6.4 mm [.250"] apart.
 - Lower relative humidity of environmental chamber to 25 percent. Raise temperature of environmental chamber to 95 degrees Fahrenheit.
 - Temperature and relative humidity shall remain consistent within environmental chamber for 336 hours.
- **Step 4**

- Remove test specimen from the environmental chamber and measure for deviations in flatness and warp along each of the four axes:
 - Bottom left corner to top right corner
 - Top left corner to bottom right corner
 - Center top to center bottom
 - Center left to center right
- Deviations in flatness and warp of test specimen shall be measured on each of the four axes at the point of the largest observable deflection across each of the four axes.
- Measurements shall be taken within one hour of each panel's removal from the environmental chamber.
- Evaluation
 - Record the largest observed deviation in flatness across each of the four axes at each step of the test process.
 - Deviation measurements greater than the tolerances indicated in the table below shall be deemed as a failure to meet the performance requirements of this test.
 - Tolerance shall not exceed the following per lineal 305 mm [12"]:

Premium	Custom	Economy
.8 mm [.031"]	1.2 mm [.047"]	1.6 mm [.063"]

- Test Report
 - Test documentation including company information, photos, and technical information compiled into a printed report document.