Expansion/Contraction Formula & Example

Expansion & Contraction Formula:

Total board length (inches) x Change in Board Temperature ($^\circ$F) x 0.000045 (in/in-$^\circ$F) = Total Board Movement (inches)

Example Calculation:

Board Length (in feet) = 12ft

Board Length (in inches) = 12ft x 12 (in/ft) = 144in

Board Temperature at Install = 80°F

Estimated Change in Board Temperature to Cause Expansion = 120°F - 80°F = 40°F

Total Board Movement = 144in x 40°F x 0.000045 (in/in-$^\circ$F) = 0.259in ≈ 1/4"

Board Movement on Each End = 0.259in / 2 = 0.1295in ≈ 1/8"

Note - Contraction can be calculated in a similar manner as shown above.

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