

This advisory concerns the prevention of problems in architectural woodwork products as the result of variations in relative humidity. It is further intended as a reminder of: 1) the natural dimensional properties of wood and wood-based products such as medium-density fiberboard, plywood and high-pressure laminates, and 2) of the routine and necessary care – and responsibilities – which must be assumed by those involved in their design, installation and use.

Wood and wood composites are hygroscopic materials, and under normal conditions all wood products contain some moisture. Wood-based products readily exchange molecular moisture with the water vapor in the surrounding atmosphere according to the existing relative humidity. In high humidity, wood absorbs moisture and swells; in low humidity wood releases moisture and shrinks. As normal fluctuations in humidity occur, the resulting dimensional response in properly designed and executed construction will be insignificant. To avoid problems, it is recommended that relative humidity be maintained within the range of 25-55%. Uncontrolled extremes – below 25% or above 55% relative humidity – can likely cause problems.

Architectural products, such as those made by New England Classic, are manufactured from wood and wood-based composites which have been dried to an appropriate moisture content and maintained at this condition up to the time of delivery. Subsequent dimensional change in wood-based materials is and has always been an inherent natural property and character of wood and wood-based materials.

**Acclimation:** Although products constructed with engineered wood products perform more uniformly than their solid wood counterparts, changes in dimensions occur due to changes in relative humidity and temperature. For this reason, New England Classic recommends all components must be conditioned in their final environment (temperature and relative humidity) for at least 2 to 3 days before installation. For best results, all boxes should be opened and all components should be removed from their package and stacked flat with spacers between pieces.

**Storage:** New England Classic components must be stored indoors on a flat, level surface, with adequate support to prevent sagging – just as should be done with all fine wood.

**Product use in high-humidity areas:** If New England Classic components are to be used in an application where high humidity is likely, such as bathrooms and finished basements, all component surfaces (face, back and edges) must be sealed with a high-quality wood sealer or primer, prior to installation and finishing. Priming and sealing is the responsibility of the contractor/installer.

New England Classic is not liable for changes in dimensions, shrinkage or expansion, due to changes in atmospheric conditions, including temperature or humidity.

For additional information on this subject: *Wood Handbook*, 1987; AWI Quality Standards, 1997 edition