

SUBJECT: MOISTURE CONTENT OF LUMBER USED WITHIN EXTREME SIPS

Integral to the construction of an Extreme SIPs structure is the lumber used as plating and splines within the SIPs. Extreme SIPs are designed to be used with kiln-dried lumber. Therefore, Extreme Panels recommends the use of kiln-dried lumber with a moisture content at or below 12%. This requirement helps to minimize any shrinkage of the lumber used within the SIPs, reducing the potential for unsealed gaps and cracks.

The Forest Products Laboratory's Wood Handbook, Chapter 12, reports that lumber with a moisture content greater than 19% may experience considerable shrinkage as it dries to an equilibrium moisture content below 19%. If this shrinkage occurs within a SIP plate pocket, gaps or cracks may open, providing a pathway for air movement. This air may contain moisture, and if it encounters a surface at or below its dew point temperature, condensation will occur. Using lumber with a moisture content of 12% or less provides a reasonable safety factor to reduce the potential for lumber shrinkage and minimize issues associated with lumber shrinkage.