

Minimize Glulam Checking Through Proper Storage and Handling

Glued laminated timbers (glulam members) may develop seasoning checks as a normal function of the moisture stabilization process. The degree of checking that might occur in an individual member (risk of checking) will depend on the combined effects of the initial moisture content, the seasonal conditions, handling and storage practices at distribution facilities and job sites, and the in-service environment after installation. The degree of checking in individual members will be influenced by the rate at which the glulam member moisture content changes from a moisture content level at the time of manufacture to its expected in-service level. There are several steps that distributors and builders can take to minimize seasoning checks. When checks do occur, they are primarily an aesthetic concern and can be filled with an elastomeric filler to improve appearance.

TIPS FOR PREVENTING GLULAM CHECKING

Relative humidity < 50%
Temperature > 90° F

INCREASED CHECKING POSSIBILITY

Relative humidity > 65%
Temperature < 90° F

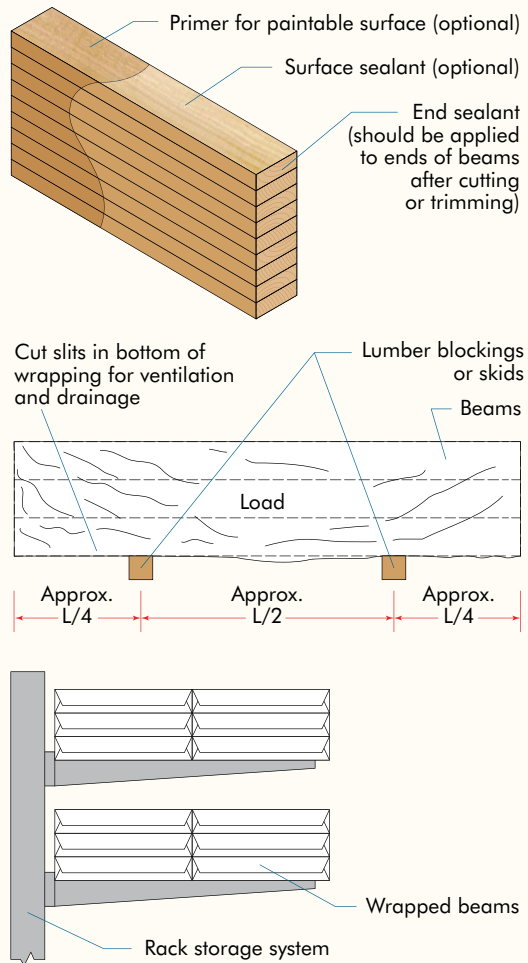
REDUCED CHECKING POSSIBILITY

- Do not unwrap and expose member to the elements in early summer, with rapid change in glulam moisture content likely as season progresses.
- In arid climates, avoid direct exposure of unwrapped members to the effects of the sun and wind.
- Avoid direct exposure of unwrapped members during storage or after installation, with no secondary cover/protection provided.
- Do not store on site without protection or unwrap prior to installation.
- Limit member exposure to weather conditions prior to building enclosure.
- Cover and protect member after installation.
- Avoid rapid changes in temperatures that can affect the rate of drying during the first full heating cycle.
- Avoid direct exposure of glulam to heating outlets.
- Cut slits in the underside of the wrapping paper to guard against water “ponding” inside the wrap during job site storage.
- Avoid rapid changes in seasoning rate by construction scheduling and control of building's interior environmental conditions.
- Apply end sealer when the glulam beam is cut to length at a distribution yard or job site.
- Remove wrapping after installation in enclosed space where members are allowed to stabilize naturally during construction.
- Wrap members and store them well off the ground with secondary cover.

Glulam manufacturers cannot assure that seasoning checks will not occur in individual glulam members as the result of handling and storage at distribution facilities, job site storage, installation, and regional climatic conditions. To reduce the possibility and severity of checking, it is important to coordinate delivery schedules to minimize job site storage. Guard against direct exposure of glulam members to severe conditions like high temperatures, rain, wind, and other damaging weather conditions. Hot/dry and wet/winter climates can both create high-risk environments, depending on how quickly the moisture content is lowered. If high-risk conditions cannot be avoided, take extra precautions in storage and installation to protect the beams and columns.

FIGURE 1

GLULAM STORAGE AND HANDLING



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