

## **SURFACE MOLD ON LUMBER AND STRUCTURAL COMPONENTS DISCUSSION**

### **Summary of Facts Regarding Surface Mold on Lumber**

As fungi, molds require three factors to grow: water, oxygen and a food source. In addition, molds require temperatures between 40° F and 100° F. The term “mold” actually refers to the fuzzy appearance that colonies of fungi produce when growing on the surface of wood or paper faced products.

When a mold spore lands on a surface, such as lumber (a source of nutrition), that is sufficiently wet, the spore will begin to grow. It is the wetting of lumber by rain or condensation that facilitates mold growth. Surface mold can grow on lumber when the moisture content is between 20% and 28%. A moisture content below 20% will not support mold growth. Solid lumber must remain sufficiently wet for approximately seven days before surface mold begins growing. Decay fungi, which can affect the structural integrity of the lumber, requires a moisture content of greater than 28%, essentially saturation for a prolonged period of time.

Lumber is classified as “air-dried” when its moisture content is less than 19 percent. “Kiln-dried” lumber has moisture content by weight of 16 percent or less. Mold will not grow on the surface of air-dried or kiln-dried lumber unless re-wetting occurs by liquid water or prolonged exposure to very high relative humidity.

Contrary to popular belief, exposure of lumber to hot humid conditions in the southern United States does not lead to mold growth. Rather, it is the wetting of lumber by rain or condensation that facilitates mold growth in hot humid climates. In fact, during periods of hot, humid weather, wood will actually be drying for much of the day. The greatest risk of mold growth occurs during cooler months when the relative humidity remains above 90 percent for sustained periods, resulting in wood moisture contents above 19 percent.

Molds also produce chemicals called volatile organic compounds (VOCs). These VOCs become airborne and some of them are responsible for the musty smell that humans perceive as “moldy.” While these VOCs may be offensive to many people, the VOCs are not thought to be toxic, that is, to cause illness. Some molds at certain times do however produce toxic chemicals called “mycotoxins.” Some of these mycotoxins can cause illness in humans if a sufficient quantity of the toxin gets into the body.

Sensational headlines have proclaimed that people are sick and dying as a result of exposure to toxic mold. There is no scientific proof however to most of these claims. Although molds can trigger attacks of asthma or hay fever in sensitized individuals, there is no conclusive evidence that exposure to molds causes asthma or hay fever. Molds and fungi rarely cause infection in normal humans, although some fungi can cause infections in people who have weakened immune systems.

### **Mold Claim Risks Generally on the Sale of Wood Structural Components.**

Assuming for example a wood component manufacturer delivered trusses or components with a moisture content over 19% or with the presence of visible surface mold, it is foreseeable that a construction defect claim could be successfully asserted years later by the owner of a building where mold is discovered on either the building’s trusses or components. In this hypothetical situation, the manufacturer most likely would be able to point to a number of mitigating factors in its defense such as: (1) whether or not the plaintiff can prove the manufacturer in fact delivered materials with a high moisture content or containing surface mold; (2) whether or not other factors contributed to the mold growth seen in the building; (3) why the contractor did not discover the high moisture content and/or mold and notify the manufacturer prior to installation; (4) why the contractor did not allow for the trusses and components to dry out before the building was “dried-in”; and (5) why was any mold not remediated by the contractor prior to dry-in. The ultimate outcome is not clear in such a hypothetical case although an argument could be made for at least partial responsibility on the part of the component manufacturer.

Where mold claims are far more likely for wood component manufacturers is during construction where mold is discovered appearing on trusses or components that have already been installed. Where these claims occur, the contractor will typically undertake a remediation of all mold occurring at the project, including any mold contained on the trusses and components. All or a part of the remediation expense, plus possibly dollars incurred for any delays experienced, may then be asserted against the wood component manufacturer. In these types of circumstances the wood component manufacturer needs to be able to convince the customer that it bears no responsibility

### **Wood Component Manufacturer Best Practices as it Applies to Mold**

Generally when a wood component manufacturer faces mold claims from its customers—there will exist: (1) delays in construction; (2) high levels of rainfall; and (3) poor moisture management on the part of the customer's jobsite personnel and subcontractors. To the extent a customer asserts a mold claim, whether informally or formally, a wood component manufacturer's response and arguments are generally along the lines set forth in the following bullet points:

- Make sure your company personnel are well versed concerning mold on lumber and can immediately provide the customer with facts and recommendations concerning mold. This can prove especially helpful where "mold remediation" experts are suggesting measures to the customer which do not seem logical and may involve a potential significant expense.
- Point out to the fact that in your manufacturing facility there are many different individuals are charged with culling water damaged lumber prior to cutting and fabrication and to the extent that at times surface mold may exist prior to delivery—that cleaning is done with the scrubbing of detergent and water.
- Maintain production and delivery records to show that trusses and components are delivered relatively soon after manufacturing—in other words there was little time for the trusses and components to be exposed to weather at your manufacturing and thus highly unlikely that your company is responsible for any mold that may exist.
- Make sure to carefully review all customer contracts and specifications for provisions that may exist that impose undue responsibility regarding mold.
- Make sure your contract clearly states that your responsibilities are limited to the design, fabrication and delivery of trusses adhering to the customer's project schedules (which schedules are subject to the approval of your company) and to provide trusses that are free from defects in materials, design and workmanship.
- Provide jobsite packages at the same time product is delivered which contain industry recommendations on how customers ought to store trusses at jobsites to minimize damage that may occur as a result of the weather.
- Consider the following type of provision be contained in your customer contract:

"Immediately upon delivery to the specified delivery location all risk of loss due to damage and deterioration and responsibility for the protection of the [trusses and components] sold shall pass to [Customer]. Following delivery...[Customer] shall cause to be inspected the [trusses and components] for errors in quantity or defects in quality and for conformity with the [Supplier] Shop Drawings and shall notify Supplier in writing of any claims [Customer] may have with respect to any such errors, defects, deviation or other non-conformity."

"After delivery...[Customer]...shall be responsible for unloading, handling, storing, installation, and bracing of the trusses that are the subject of this contract as well as any damage or theft of any material stored on site..."

"In the event [Customer] anticipates taking any action to cure any alleged breach on Supplier's part, Contractor agrees to give Supplier three (3) work days written notice of the cause and a reasonable period of time thereafter to cure, or commence to cure, the cause to [Customer's] satisfaction..."

The thrust of every wood component manufacturer's arguments/assertions should be that (1) trusses and components are made of wood and thus surface mold can occur where such trusses and components experience excessive wetting; (2) you conduct your manufacturing operations in such a way so as to minimize the likelihood that products delivered contain a high moisture content or visual signs of mold; (3) it is not economically feasible to store trusses and components at your facility or during delivery with tarps or other protective materials; (4) as building components will inevitably get wet during construction, it is the customer's responsibility to ensure that siding and roofing be attached as

soon as possible to protect the building components from the weather and to dry out the building before dry walling (this concept has been embraced by the drywall industry, the American Forest & Paper Association, and the NAHB Research Center); (5) as title to your products passes at the time of delivery, it is incumbent on the customer to properly store, handle and protect the products that you are selling and to notify your company immediately as to any claim of defect; and (6) to the extent any claim of default might be asserted regarding mold, the customer must have provided your company with written notice and an opportunity to cure any issues for which your company is responsible.