

MOLD... WHAT IS IT?

There are several types of mold, which in the proper conditions can grow. Mold can occur naturally on lumber under certain conditions, normally due to the presence of moisture in or around the wood, and warm temperatures. Mold breaks down organic matter and since its food sources include wood, paper, drywall, paneling and other building materials, mold can cause extensive property damage. Mold also produces mycotoxins, which could pose a health risk to humans.

When unprotected wood is exposed to the elements, excessive moisture, or contact with the ground, it is susceptible to decay.

Four conditions are required for decay to occur:

1. Moisture
2. Favorable temperature (Approx. 50-90 Fahrenheit)
3. Oxygen
4. A source of food (wood fiber)

If any of these four conditions is removed, decay or infestation will not occur. Mold requires moisture to survive, so protecting lumber and wood structures from moisture will prevent mold growth and decay.

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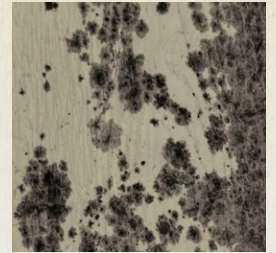
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FAST FACTS ON LUMBER & MOLD

- Discoloration aside, molds generally have little effect on the structural integrity of framing lumber.
- Mold needs a moisture content (MC) of at least 20% to survive on wood.
- Building codes require all structural framing lumber to be dried to a maximum of 19% MC before enclosure.
- If dimensional lumber is kiln-dried to a maximum 19% MC or less, the moisture content will be identified on the grade stamp.

PREVENTING MOLD GROWTH: FROM THE MILL TO THE BUILDER

When kiln dried to 19% or less moisture content, dimensional lumber will not support mold growth. However, if lumber is exposed to adverse weather or moisture during shipment, storage or in the construction process, mold can form and grow. Protecting lumber from moisture to prevent the growth of mold requires vigilance and teamwork by all parties in the chain of custody.

MANUFACTURER'S ROLE

- The manufacturer should provide the customer with a dimension lumber product that is properly dried to moisture content of 19% or less and properly grade marked.
- The manufacturer should insure the proper binding, handling and storage of lumber at the mill site.
- At the purchaser's request, the manufacturer should properly wrap the lumber and order the shipment covered with a tarp during transport.

PURCHASER AND TRANSPORTER'S ROLE

- Normally, the purchaser has the option to request wrapping and shipping options, as well as the method of shipment. A shipment on a flatbed truck should be covered, usually with a full tarpaulin, to increase the level of protection.
- The transporter is responsible for proper handling and timely delivery of the shipment. If required by the purchaser, it is the transporter's responsibility to cover the lumber with a tarp and maintain that cover from pick up to delivery.

RECEIVING FACILITY ROLE

- The condition of the lumber should be checked immediately upon delivery to the receiving facility.
- Storing lumber under cover in an open shed or a climate-controlled facility would always be ideal, although uncommon in practice. If stored outdoors, it is suggested that lumber be pre-ordered with plastic or paper wrap, or covered with vapor-permeable tarp. It is extremely important that lumber packs be properly bunked underneath (4x4s are recommended) to separate the materials from ground contact.
- Storage time should be kept to a minimum in order to reduce exposure to moisture and the elements.

BUILDER'S ROLE

- The builder should check the condition of the lumber immediately upon delivery to the site.
- On the site, lumber should be stored in an orderly fashion and protected from moisture. Lumber packs should be bunked on 4x4s. Keep lumber covered with a tarp or vapor-permeable cover.
- Practice good housekeeping and segregate scraps from the lumber storage area. Scraps scattered on the moist ground is food for mold growth.
- Once the builder is assured that all framing lumber is dried to a proper moisture content (19% or less), the structure should be enclosed as soon as possible. The purchase of a moisture meter is recommended.

BLUE STAIN

Blue stain is not mold. Blue stain or sap stain is bluish or grayish discoloration of the sapwood caused by the growth of certain dark-colored fungi on the surface and interior of the wood. This can occur under the same conditions that favor other fungi. The difference between molding and staining is made primarily on the basis of the depth of discoloration. Typical sap stain or blue stain penetrates deeply into the sapwood and cannot be removed by surfacing or chemical cleaners.

MOLD REMOVAL AND REMEDIATION

- The first step in remediation is to remove the source of the excessive moisture so mold growth ceases. The most common recommendation is to clean the wood with a solution of bleach and/or soap and water.
- Use a bristle brush or sponge to scrub the surface with a commercial cleaner formulated for mildew removal or use a diluted solution of bleach with detergent.
 - 1 part household detergent
 - 10 parts 5% sodium hypochlorite (household bleach)
 - 30 parts warm water

Wear gloves when using chemicals. The cleaned area should be properly dried. Dispose of any sponges or rags used to clean the mold area.

MOLD AND YOUR BUSINESS

Risk managers and company employees should educate themselves about mold and the potential for related problems and concerns within their companies. Preventing mold growth is the key to protecting your business from future potential liability.