SOUTHERN FOREST PRODUCTS ASSOCIATION®

Managing Moisture and Mold

Southern Pine by Design | Product Performance Facts

BASIC MOLD FACTS

Mold is a simple microscopic organism, present virtually everywhere, indoors and outdoors. Mold grows naturally in an outdoor environment, and spores can enter a house through open doorways, windows, heating, ventilation and air conditioning systems. Once indoors, it can find conditions equally suitable for growth.

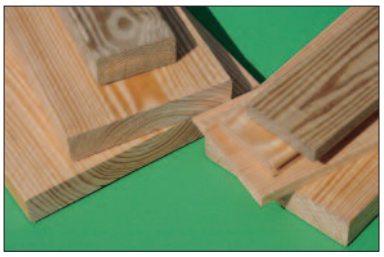
Mold requires moisture, oxygen, nutrients and a temperature between 40°F and 100°F to grow. Therefore, under normal conditions, mold will grow almost anywhere. Oxygen and temperature conditions necessary to support life will generally support mold growth. Food sources for mold include a long list of common household materials such as paper, cardboard, ceiling tiles, wood products, paint, wallpaper, insulation, drywall, carpet and fabrics.

Mold can thrive using moisture from virtually any source, ranging from condensation on windows to roof leaks. It can also draw moisture from any type of wood if the moisture content (MC) exceeds 19%.

Although poor construction and maintenance practices can create conditions that exacerbate the growth of mold, the presence of mold in today's homes has not necessarily increased. Rather, extensive media coverage of high-profile mold litigation has heightened public awareness about mold and alleged mold-related illnesses.

Protecting wood products from exposure to moisture requires vigilance and teamwork by all parties in the chain of custody.

MOISTURE



Protecting wood products from moisture is the key to preventing mold growth. Properly dried lumber (MC 19% or less) and most engineered wood products do not contain enough water to support the growth of mold. However, all wood products, including lumber, plywood, oriented strand board, glulam beams and I-joists are equally vulnerable to mold growth if not protected from moisture during transportation, storage and construction.

TIPS FOR MOLD CONTROL

Paper Wrap — Typically, manufacturers offer buyers the option to wrap units (lumber on five sides) or individual pieces (glulam beams on all six sides) with special paper wrapping for additional protection during shipment and storage. Although effective, paper wrap can be damaged during transit or storage, so it should not be the only step taken to protect wood products stored in the lumberyard or at the job site.

Proper Shipping — Most wood products are shipped from the manufacturer on open rail cars or flatbed trucks. Paper wrapping can increase protection against moisture intrusion; covering units loaded on flatbed trucks with a full tarpaulin will increase the level of protection as well.

Job Site — Inspect the wood products immediately upon delivery to the job site.

Verify an industry-certified grade mark. Stamped on every piece of material, this mark ensures the builder that the manufacturer has graded the material in compliance with the appropriate product standards. For example, look for Southern Pine grademarks that include "KD19", indicating the material has been kiln-dried to a moisture content of 19% or less.

Confirm the moisture content with a moisture meter if questions arise concerning the material's delivered moisture content. Once the builder has verified that all framing material delivered to the site has a moisture content of 19% or less, the material should be used as quickly as possible.

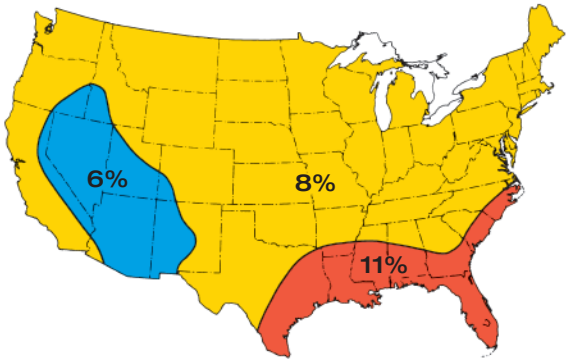
Protect lumber stored at the building site from moisture. Units need to be properly supported at least four inches (4″) off the ground, and covered with a tarpaulin or other vapor-permeable cover. To limit exposure to moisture, jobsite storage time should be minimized and the structure enclosed as soon as possible.

Practice good housekeeping and segregate scraps from the lumber storage area. Scraps scattered on the ground provide food for mold. If mold is found on wood products during construction, clean the material and allow it to dry before using it within the structure.

Water Damage — In a remodeling or flood recovery situation, clean any mold found on or in an existing structure. Identify and correct any moisture sources. Allow all framing material to thoroughly dry below 19% moisture content before enclosure. Ventilation is the key to proper drying. Keep doors and windows open and, when possible, use fans to accelerate the removal of moisture.

DIMENSIONAL STABILITY

Proper seasoning and storage helps provide optimal dimensional stability of lumber in service. To minimize shrinkage, Southern Pine grading rules require that dimension lumber 2″ or less in thickness be kiln-dried or seasoned to a moisture content of 19% or less. Additional conditioning will take place as lumber is stored or used where it will reach equilibrium moisture content.



Average in-service moisture content for wood products used in enclosed, conditioned structures

Important Facts About Lumber & Mold

- The key to preventing mold growth is moisture control. In order for mold to grow, it requires ample moisture, either in liquid form or conditions of high humidity. If present on lumber and wood building products, mold needs a moisture content greater than 19% to survive. A relative humidity of at least 70 to 90 percent will also support mold growth. Once growth occurs, molds can spread by the production of spores.

- Structural framing lumber should be dried to a moisture content of 19% or less before enclosure.
- Southern Pine dimension lumber is typically kiln-dried to a moisture content of 19% or less. The moisture content will be identified on the grade stamp.
- Discoloration aside, mold generally has little effect on the structural integrity of framing lumber.

INSTRUCTIONS FOR CLEANING MOLD

A detergent and water solution or a 10 percent bleach-to-water solution (1-1/2 cups bleach per 1 gallon of water) can be used to clean mold.

Using a bristle brush or scrub sponge, clean the surface using the recommended solution. Rinse the brush/sponge frequently. Thoroughly dry the wood after cleaning.

Large mold colonies should be addressed by an experienced professional.

High-efficiency particulate air (HEPA) vacuuming after cleaning may also help remove any remaining mold spores.

Warning: Do not mix bleach with ammonia or with any other detergents or cleaners that contain ammonia. Mixed together, bleach and ammonia form a lethal combination, similar to mustard gas. Many household cleaners contain ammonia, so be extremely careful when selecting the type of cleaner to mix with bleach. Protect eyes and skin from contact with the bleach solution and provide ventilation if using bleach indoors.

Note: This cleaning process will not prevent future mold growth. Only changing the environmental conditions (i.e. eliminating the moisture) can prevent future growth.

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