TECHNICAL BULLETIN

STRUCTURAL BOARD ASSOCIATION

Representing The OSB Industry

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MOLDS

Molds are members of the fungi family and are quite common. Other types of fungi include stains (such as blue stain and sap stain) and decay (or rot). In order to reproduce, molds release microscopic spores, which travel through the air and can attach themselves to almost any surface. Mold and mildew grow on the surface of materials. They cause discoloration, but they generally do not affect the material's structure.

Almost all building materials are susceptible to surface mold formation under certain conditions. If these conditions of air, temperature, moisture and a food source are met for a sufficient length of time, mold will grow. However, mold formation is not a recent phenomenon and the key to eliminating mold growth on surfaces is **controlling the moisture**, since in most buildings there is usually plenty of air, moderate temperatures and organic "food" in the building materials and furnishings.

Like all wood products, OSB can be affected by changes in moisture conditions and prolonged exposure to high moisture conditions, or direct exposure to the elements such as rain, ice, or pooling of water. Products should be loaded and transported in dry conditions. Proper storage of OSB before construction calls for common sense measures such as keeping panels in bundles off the ground until installation and under cover if outside, such as loosely covered under plastic or tarps to allow air circulation, or under an open storage shed. Design, specification, installation and finishing of materials should be as per the requirements of the local building code and applicable standards.

OSB is a material that is manufactured to perform well under most climatic conditions found in covered, well-ventilated areas. OSB is manufactured very dry, with average moisture contents in the panels leaving the warehouse of less than 5%. At these very low moisture contents, mold is not an issue. OSB is made with thermosetting resins: once cured these resins cannot be softened by heating, are extremely resistant to moisture and will not break down in the presence of water. OSB provides sufficient strength and stiffness performance when exposed to weather during long construction delays. In dry service conditions found in protected construction, the equilibrium moisture content of OSB will be around 8 to 9% (12 to 15% in solid wood). These dry conditions are not conducive to mold growth.

OSB panels used in construction must bear a grade mark indicating their bond classification and other characteristics. This bond classification is related to the intended end use of the panel, i.e. **the moisture resistance of the glue bond. It does not relate to the physical (i.e. erosion, ultraviolet) or biological (i.e. fungal decay, insects, mold) resistance of the panel.** OSB is classified Exposure 1, which per the definition of the performance standard PS2, is a bond classification for panels suitable for uses not permanently exposed to the weather. Panels classified as Exposure 1 are intended to resist the effects of moisture due to construction delays, or other conditions of similar severity. **Moisture resistance of the panels is limited to dry service conditions, and does not mean that OSB panels are waterproof or mold resistant.** For prolonged high moisture or wet conditions there is potential of mold growth. The SBA does not recommend that panels be exposed to these conditions. Remember also that conditions that are sufficiently moist to support mold growth may also be sufficiently moist to degrade many materials in your home, e.g. wood products may start to decay, metal products may start to rust, or other products may start to deteriorate.

Since all structural wood products such as lumber, plywood, or OSB, share the same basic chemical composition, namely a matrix of cellulose and lignin, OSB is not significantly more susceptible to mold growth than other wood or wood-based products. Additionally, the cured resins used in the manufacture of OSB have not been found to make any noticeable contribution to the growth of molds.

Remember: keep it dry! If mold begins to grow, find the source of moisture intrusion and stop it. Control build-up of moisture. Be sure that exhaust fans are exhausted to the outside. Use dehumidifiers where necessary, but don't allow the dehumidifier itself to become a source of mold. Insulate any duct that passes through unheated attic or crawl spaces. If moisture intrusion has been occurring over time, hire a professional to examine the structure to determine if permanent damage has occurred.

In the event of mold growth, cleanup can be achieved on most small affected areas of less than ten square feet, after first eliminating the source of moisture intrusion and/or build-up. **Please consult the appropriate authorities if such cleanup is elected. Remember, due care must be taken to avoid exposure and to avoid spreading the mold and its spores through undue disturbance during the cleaning process. Use all protective equipment as recommended. (Caution: Never mix chlorine bleach solution with other cleaning solutions that contains ammonia because of risk of toxic fumes!)** For moderate to serious mold problems, professional contractors trained in mold remediation should be used for cleanup. After the cleanup is complete, the areas affected by the mold should be routinely inspected to confirm the effectiveness of the remedy.

Given their ubiquitous nature, total avoidance of molds is virtually impossible. Both industry and the medical community are currently studying health risks associated with exposure to mold. The SBA is participating in an industry task group that is developing a scientific database of mold on wood products.

For additional information about mold, you can consult the following, amongst many other sources:

- *Mold in Residential Buildings*, National Association of Home Builders, www.toolbase.org
- *About Your House: Fighting Mold - The Homeowners Guide,* Canadian Mortgage and Housing Corporation, www.cmhc.ca
- *Got Mold? Frequently Asked Questions*, Washington State Dept. of Health, www.doh.wa.gov
- *A brief Guide to Mold, Moisture and Your home,* U.S. Environmental Protection Agency, www.epa.gov