

Technical Tip

Preventing Mold Growth on Bare Wood

Mold and mildew (actually another name for mold) are colonies of living organisms that can grow on the surface of many materials including wood. Their color may range from white to black with just about every color in between. If the discoloration is green, it's most probably algae, a plant, since molds and mildews do not contain green chlorophyll. Like most living organisms molds require air, water and a food source for survival. Bare wood is quite susceptible to mold growth since the porous surface provides lots of places for spores to germinate and many of wood's nutrients are available as food. This is especially true for newly harvested wood that still contains a high sugar content. In addition, bare wood absorbs water, thus supplying the moisture these organisms require.

Although it is fairly easy to remove mold from bare wood surfaces (Wood ReNew does an excellent job), preventing its growth on green logs in particular can be somewhat of a challenge. Thanks to the internet one popular misconception is that borate treatments will prevent the growth of surface molds on wood. This is NOT TRUE! Although the presence of borates will inhibit the growth of some types of surface molds there are other types that actually thrive on borate treated wood. Borates are quite effective against wood decay fungi but surface molds are very different from decay fungi, and it takes other methods of control to prevent their growth.

When it comes to preventing the development of mold on wood, the best and most effective approach is to provide a dry environment. Molds cannot survive in dry conditions so if the logs are stored under cover with lots of air flow around them chances are that mold will not grow on them. But as we all know there are occasions when ideal storage conditions may not be practical so in those cases how can the formation of mold be prevented. There are some chemical treatments that can be applied to bare wood that will kill existing mold colonies and prevent the growth of mold for several months. One of the more commonly used products is didecyl dimethyl ammonium chloride, commonly referred to as DDAC. It works well and several years ago we used to sell a brand of it named Britewood XL. However, the one downside of DDAC is that it is quite toxic and corrosive to skin. The US EPA signal word for containers containing DDAC is a well-deserved **DANGER**, and it may not be available in all areas.

Another chemical used for killing and preventing mold growth is chlorothalonil. At low concentrations it's commonly used for preventing fungal growth on peanuts and potatoes as well as being a fungicidal additive to paints and stains. Sostram Corporation makes a chlorothalonil product named Mold-Ram that inhibits surface mold and mildew growth on wood, wallboard, concrete and masonry (cinder) block. It carries a **WARNING** label, and it too may not be available everywhere.

Although there are several other products available for controlling mold, the last one we'll cover is thiabendazole, the active ingredient in Stay Clean. Although not very effective for killing a heavy coat of mold already growing on wood it does a pretty good job preventing the re-growth of mold on a clean surface. The major advantage of thiabendazole is that it's not very toxic and carries a **CAUTION** label, the lowest US EPA toxicity classification.

So is there a role that a Perma-Chink Systems product can play to prevent the growth of mold on bare wood other than one of our complete finish systems? If a manufacturer or contractor wants to protect their logs at the mill or on the job site during construction they can apply a coat of Prelude that has been dosed with Stay Clean or an equivalent product that's labeled for adding to water-based paints or stains. This will help prevent the growth of mold on top of the Prelude film. The limitation of this combination is that it must be applied to a fairly clean surface since it may not kill all of the mold colonies that are already present. However it offers some definite advantages over those products that just eliminate and prevent mold. First, since Prelude contains UV Boost it will help prevent surface graying due to sun exposure. Second, the Prelude film will keep the surface cleaner during transport and construction. And third, it will help regulate the drying process which to some degree should lessen initial checking and fissuring. We already have some manufacturers using this system and they are quite pleased with the results.



Mold Growth on a Bare Green Log