



Bulletin Number: 709

Removing Acrylic Floor Finishes From Wood Floors

Wood floors that have had a water based acrylic floor finish applied on them require special attention before they can be refinished with a wood gymnasium coating. The acrylic floor finish must be removed in order to achieve good adhesion of the gym finish. Removing the acrylic floor finish can be done two different ways. One is stripping with water-based floor finish strippers that can be very risky to the wood itself. Due to this risk, Buckeye International does not recommend it. **The use of waterbased floor finish strippers on any wood floor is done at the risk of the user!** The alternative is sanding down to bare wood which is very expensive.

Because neither of these options is very attractive, applying a traditional floor finish to a wood floor is not recommended under any circumstance. It simply puts the facility owner into a bad position later on.

The risks of using floor finish strippers on wood.

Wood is naturally capable of soaking up water. This can lead to cupping (boards pushed side-by-side each other such that the edges raise up and look like mountain ranges). Soaking water can lead to warping and raised grain. So, the process of using a floor finish stripper on a wood floor begins with the same concern of having a long-standing presence of water. The wood can get damaged just from the water. If the floor has a good, cohesive coating underneath the floor finish that would keep the water from ever getting exposure to the wood itself, these concerns about long standing water become moot. How can you tell if the water used during stripping and rinsing might get exposed to raw wood in the process? You can't unless you know very well just how good the urethane underneath was before the floor finish was applied. Otherwise, you are only guessing.

Wood fibers can be attacked by alkaline chemistries. Place a drop of a high pH product onto a piece of paper and you will see the paper turn dark brown. This reaction can turn a light colored wood floor (such as maple or birch) into a floor that looks like walnut. In order to avoid changing the color of the wood itself, mild pH strippers would have to be used. Again, this assumes there are areas where the previous coating has weak spots and the chemistry of your stripper would be able to get exposure to the raw wood itself.

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The process.

Working in very small sections in order to minimize the contact time, apply a thin film of a diluted mild pH stripper. Let soak 3 to 5 minutes and promptly scrub with a swing machine equipped with a black pad. Immediately pick up the solution with an autoscrubber, give it a quick rinse, and let it start drying. If the wood has a good layer of urethane protection, you shouldn't see any dark discoloration indicating the wood was allowed to get wet. If you see areas where the wood appears darker, those areas are likely to also feel somewhat like corduroy as it dries. This is grain raise. If there is a substantial amount of grain raise sprinkled throughout your floor after the stripping process, the floor should be dry abraded with an SPP maroon pad and the dust generated removed by sweeping with brooms and several passes of a backpack vacuum. Finally, the very last remnants of dust can be removed by tacking with a towel only very lightly moistened with water, or tack with a dry towel until the towel no longer removes any residues.

This procedure of stripping floor finishes with a waterbased floor finish stripper is never guaranteed to be successful. There is always a risk that the long standing water associated with such a procedure will lead to cupping, warping, and grain raise. If there is heavy buildup that would require multiple applications of stripper, the risk is even higher. Sometimes a heavy buildup situation inclines the crew to choose a more aggressive, higher pH stripper. Again the risk goes up that the chemistry might discolor the wood permanently. It all depends on whether or not the wood fibers become exposed.

Given the risk of permanently damaging the wood itself, in cases where a traditional waterbased acrylic floor finish has been applied to a wood floor, Buckeye International recommends complete sanding down to bare wood before applying any of our urethane gymnasium coatings.

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