TOOLBOX

Linseed paint starter kit

The tools and supplies needed to work with linseed paint aren't exotic, but online specialty suppliers are the best option for one-stop shopping.

pine and Douglas fir. In fact, linseed paint adheres to most materials, including wood, metal (where it is a terrific rust-preventative coating), plaster, glass, and even plastic.

Environmental profile

For paint to be labeled "zero VOC" it has to have less than 5 grams per liter (g/L) of volatile organic compounds. As a point of comparison, the maximum number of VOCs in Heron linseed oil paint is 1.89 g/L. Often the biggest contributor to VOCs in linseed paint is the manganese driers added to speed up the drying process. These ingredients aren't necessarily going to be found on the paint's SDS (safety data sheet) either.

"By law, manufacturers do not need to disclose all ingredients, even carcinogens, if they fall below the 'cut-off values/concentration limits,'" Joslyn explains. "For example, none of the ingredients in our added manganese drier are in quantities above 0.1% (cut-off for disclosure), but we voluntarily list it on our SDS anyway."

In general, people associate alkyd paints with high VOCs and acrylic paints with low VOCs, but according to Brouns, that's not always an indication of a healthier product: "The reduction of the VOCs in these paints means they have to add all kinds of other chemicals—stabilizers, chemical emulsifiers, anti-coagulants, phthalates—to make their products work. These paints are no healthier than previous generations."

It's also difficult to ignore the environmental concerns of all this failing modern paint. Swiss-based Environmental Action found that 58% of all microplastics in the ocean are from paint, making it the largest single source of microplastic pollution. It's hard to balance that against faster dry times and easy cleanup.

The mold concern

Probably the biggest hurdle for the reintroduction of linseed oil paints is the worry about mold. For many builders and painters, their only experience is with cans of "boiled linseed oil" sold in local hardware stores and paint shops. It soon became common lore that these products, when applied to wood in exterior situations, would bloom with black spots of mold. The unfortunate truth is that mass-produced cans of oil tend to play fast and loose with their labels. Most commodity-brand boiled linseed oil is not truly boiled at all. The oil is extracted with the help of chemicals, not purified to remove the proteins and mucilage that are highly susceptible to mold growth, and mixed with a variety of heavy metals to enhance drying time.

The next nail in the coffin was in 2007, when Swedish-made Allback linseed paint became available in the U.S. through some specialty retailers. Shortly after this reintroduction of linseed paint to America, users reported black spots appearing on their freshly painted projects. It came to light that Allback offers zinc oxide—a common pigment that helps fight mold growth—as an aftermarket additive, but not as part of their standard mixing process.

Critics might argue that without white lead, a common and highly effective mold-resistant additive used in paint up until it was banned in 1978, modern versions of linseed paint are too risky. It's true that zinc oxide isn't a guaranteed cure-all. "While zinc oxide assists in retarding [mold] growth," Gibbs and Wonson explain, "it may not be sufficient in climates where wet paint is subjected to these conditions over long periods of time." But many linseed paint advocates are quick to argue that any paint, linseed, acrylic, or otherwise, will be at risk for mold growth if there is likely to be very low drying potential or even standing water.

The type and quality of oil used to make the paint, or to thin it for application, matter a great deal as well. "Studies have shown that mold and mildew will happily set up shop on wet, uncured raw linseed oil," explains Joslyn, "but those same studies have tried cultivating mold on a cured surface, and the mold does not propagate." This is one of the reasons that linseed paint is made with boiled linseed oil as opposed to raw linseed oil (used only on the first coat); the latter takes a very long time to dry.

So choose a product with thoroughly purified and degummed oil in it, add only raw linseed oil to the primer coat (mixing it separately from the remainder of your paint), and remember that products with small amounts of driers, as well as natural pigments that prevent mold growth, are a good thing.

Maintenance is needed and doable

The hard truth is that there's no such thing as a maintenance-free finish. The typical life expectancy of premium exterior acrylic paint is five to seven years, maybe 10 if you're lucky. In the case of acrylic