



How to Prime New Pine

Q. *We're new home builders and use a lot of newly milled kiln-dried eastern white pine exterior trim. We paint it in batches, spraying both sides with a good-quality oil-based primer, then following with two topcoats of 100% acrylic. To cut down drying time, we'd like to switch to an acrylic primer, but most painting contractors we talk to swear by an oil-based primer for pine because it penetrates better. Is there an acrylic primer that would give good performance?*

A. *Duffy Hoffman responds:* Why use oil primer first? New pine has very little porosity; it's hard and allows little penetration. It also contains a lot of

resin, which makes it hard for an oil primer to penetrate. I recommend using a latex primer first, followed by a second coat of oil primer if your customer insists. But you could also use two coats of latex primer, if you prefer.

There are many good acrylic primers that could work for you. California Paints and Sherwin-Williams both make a 100% acrylic. I happen to like Muralo's Cedar Solution, which has good tannin-blocking properties, and Muralo's Universal 100% acrylic primer; both have excellent adhesive properties. There are other good products on the market; it is really your choice as the

finisher. Many universal latex primers are designed for smooth surfaces, which make them a good match for new pine.

It's always a good idea to cut the pine resin by sanding with 80- or 100-grit paper. You should also ease the edges, because paint doesn't stick well to sharp corners. Note that I recommend two coats of primer, not one. If you are putting on three coats total, I would prime twice and topcoat once. The primer coat is where adhesion to the substrate has to be perfect. The topcoat doesn't do much good if the primer comes off. You only get one chance to get the primer right.

Comparing Propane and Oil

Q. *Which home heating fuel is usually cheaper, oil or propane?*

A. *Martin Holladay responds:* The short answer is that oil is almost always cheaper. Simply comparing the per-gallon prices of the two fuels does not provide a fair comparison, since a gallon of propane has a much lower thermal value (91,600 Btus per gallon) than oil (139,000 Btus per gallon). Remember that a fair comparison must take into account the heating efficiency (AFUE) of the furnaces or boilers being compared; these may be different, depending on the equipment you are considering. Finally, prices vary regionally. The following table shows how cheap propane must be in order to match the price of oil, assuming heating equipment of the same efficiency.

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If oil costs this much per gallon	Then the price per gallon of propane would need to be lower than this to be a better value than oil
0.85	0.56
0.90	0.59
0.95	0.63
1.00	0.66
1.05	0.69
1.10	0.72
1.15	0.76
1.20	0.79
1.25	0.82
1.30	0.86
1.35	0.89
1.40	0.92
1.45	0.96
1.50	0.99
1.55	1.02
1.60	1.05
1.65	1.09
1.70	1.12
1.75	1.15

If you're spraying primer, you should always back-brush, so as to fill the grain of the wood. If you simply spray the primer, it will sit on the surface and adhesion will not be as good.

Duffy Hoffman is owner of Hoffman Painting and Refinishing, Inc., in Pipersville, Pa.

LVL Dimensions

Q. *Why are LVLs sized differently than framing lumber? I can understand the 1³/₄-inch-thickness dimension, because two laminations make up a matching header for a 2x4 wall, but why are they 9¹/₂ inches deep instead of 9¹/₄?*

A. *Paul Fiset* responds: First of all, LVL is also sold in depths of 7¹/₄, 9¹/₄, and 11¹/₄ inches to match standard stick-framing sizes. Take a look at the LP Gang-Lam site (www.louisianapa

cific.com/products/) or the Trus Joist MicroIam site (www.trusjoist.com/EngSite/), for example. However, LVL is also available in nonstandard sizes like 9¹/₂ and 11⁷/₈ inches all the way up to 24 inches deep. You will find that the deeper 9¹/₂-inch and 11⁷/₈-inch versions carry a little more load than the 9¹/₄-inch and 11¹/₄-inch stock, but that's not why distributors push nonstandard depths. It's actually because the manufacturers don't want you to mix engineered wood with sawn lumber. Look at the product literature for I-joists, which are made by the same companies that sell LVL. You will see that they sell 9¹/₂-inch and 11⁷/₈-inch I-joists as well, not 9¹/₄- or 11¹/₄-inch.

Swelling, shrinkage, and stability characteristics of engineered lumber are much different than those of

sawn lumber, so mixing is discouraged. That's why there's been a trend toward engineered wood floor systems, which use a combination of LVLs and I-joists but no dimension lumber. Nevertheless, manufacturers realize that builders will have projects where matching sawn lumber is required, especially in remodeling, so they also offer "standard" sizes.

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Got a question?

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