LOW-PRESSURE LAMINATE (MElamine) VS HIGH-PRESSURE LAMINATES

Many people ask what the difference is between high-pressure and low-pressure laminates. Most of the time what they really mean is: What are the advantages and disadvantages of each? In this post, we’ll take a look at how HPL and LPL are made and why you might want to choose one over the other for your furniture.

Often times we hear high-pressure laminate compared to melamine. Technically, melamine is a chemical used in both HPL and LPL. It is really the process by which they become laminates that distinguishes an HPL from an LPL.

Since this is not a chemistry lesson, I'll give you a very brief description of what melamine is. It's an organic based, white crystalline powder made by heating cyanamide (which is an acidic crystalline compound). Melamine, combined with other chemicals becomes a plastic resin. Don't worry. It's perfectly safe and has been used by consumers since the 50’s without any adverse effects.

Impregnating layers of kraft paper (a really strong paper or cardboard) with melamine resin creates melamine laminate. This newly formed layer of laminate is combined with a decorative film layer (like a wood grain, solid color, or pattern) then attached to a wooden substrate like fiberboard or particleboard core materials. The resulting products are used in furniture, counter tops, walls, floors, and elsewhere. The process by which the melamine infused, laminate paper is attached to the substrate is really where HPL and LPL differ.

High-Pressure Laminate: The layer of laminate is adhered to the substrate under pressures of 70 to 100 bars (that’s between 1,000 and 1,500 psi) and temperatures of 280 to 320 degrees Fahrenheit using adhesives. Low-Pressure Laminate: The layer of laminate is adhered to the substrate under pressures of 20 to 30 bars (between 290 to 435 psi) at temperatures of 335 to 375 degrees Fahrenheit with no adhesives.

But what are the advantages of one over the other? Most people would say price. The price of LPL is usually less expensive than HPL simply because it does not cost as much to manufacture. They are both flame retardant and include antibacterial properties, making them a great hygienic choice for food preparation areas and medical offices.

Although both are resistant to chemicals and heat, HPL is slightly more durable when it comes to these hazards. This might be something to consider if you’re selecting furniture for a lab, commercial kitchen or healthcare facility.

Inotec’s products are manufactured with LPL as a standard. However, we do offer an HPL alternative for worksurfaces and transaction tops. All curved items are made of HPL as a standard.

The main thing to consider when choosing HPL or LPL is how the furniture will be used and whether the price is worth the extra protection that HPL provides. In the long run, it certainly might be worth a few extra dollars up front if it means reducing damage during daily use. However, both products are excellent choices — and for most applications LPL is perfectly acceptable.