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# SELECTING THE RIGHT WOOD/LAMINATE FOR FURNITURE & LOCKERS

## Internal construction of a typical laminated panel product.

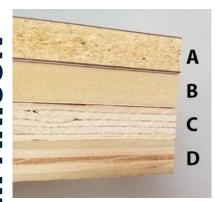
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- Top protective layer: usually clear so you can see the decorative layer below
- 2 Decorative layer: usually a solid color or a wood grain pattern printed on thick paper
- 3 Substrate or core layer: PB (Particle Board), MDF (Medium Density Fiberboard), plywood or a plywood/ MDF hybrid
- 4 Backing layer or stabilizing layer: can be the same as the top layer or a balanced, lower-cost backing

### **Panel Construction**

Athletic Edge wood/laminate furniture and lockers are constructed of paneled material with decorative overlays on the outside faces and edges of the panels. The material primarily consists of 3/4" thick panels with several different types of overlay and core panel materials.

Our paneled materials are available in two main categories: real wood veneers and synthetic laminate products.



#### Core Material Choices

we offer 4 primary options for core material:

A. Particle Board (PB) – This is the lowest cost solution for core material. PB is a blend of natural wood fiber (coarse sawdust) mixed with adhesive and pressed tightly to form a panel.

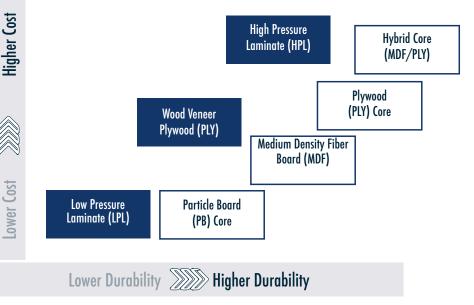
B. Medium Density Fiberboard (MDF) - MDF is an engineered wood composite that is similar to particle board, but is much denser and stronger than particle board. It uses more 'glue' (adhesives and binders) and finer, more controlled size of wood particles. It holds screws better and it's more dimensionally stable than PB.

C. Plywood – True plywood is made of layers or bands of thinly sliced wood glued together to form a thick panel. Typically, a plywood core will alternate the grain direction of each layer of wood. This yields the best strength and minimizes warp that is common to natural wood products.

D. Another core material choice is a hybrid product that uses plywood and MDF combined. This material is called Classic Core or Armor Core, and employs MDF cross bands within the wood layers. This our standard core material for all hardwood veneer products.



# MATERIALS Comparison



#### Cost vs. Durability

There are several factors to consider when selecting construction materials for equipment. Two of the most important factors for material selection are initial cost and long-term durability.

Generally, our lowest cost materials use Low Pressure Laminates (LPL) with a Particle Board Core. These are also the lowest durability materials and will not withstand as much wear and tear as other material before the quality is degraded. The particle board core material is also not very dense. Furthermore, it will not retain screws as well as more dense materials, such as Medium Density Fiber Board (MDF).

Generally, our highest cost materials are High Pressure Laminates (HPL) with a hybrid core. The protective and decorative layers of HPL products are much thicker than LPL products. The hybrid core material is denser and more dimensionally stable that other core materials. These materials will provide the longest lasting and most durable products.

#### Water/Moisture

Natural wood fibers are susceptible to water damage and discoloration. All of our core materials are susceptible to water damage and should not be used in wet applications. For damp or moist environments, some treatments are available that can be added to the core material during manufacturing that will hinder or slow water damage.

