

## Definitions & Applications

**ALUMALITE:** Painted aluminum surface (2 sides) with a corrugated plastic core. It serves as a light-weight alternative to plywood for sign painting and vinyl graphic applications. Available in 1/4" only. It will not rust, swell or delaminate and is impervious to water. These features make it perfect for outdoor, or UV exposed indoor applications.

**ALUMINUM:** .040 gauge aluminum painted (1 side) with flat white back. Extremely light-weight for sign painting. Denting is possible. **(discontinued)**

**CELTEC:** Rigid PVC expanded vinyl that offers an exceptional variety of usages (mostly sign-making). No priming is necessary and it will not rot or delaminate. Direct sunlight may cause panel to misshape. Also sold for such applications as shower enclosures and is FDA approved for use in commercial kitchens where food preparation is conducted.

**D-LITE:** 1/8" version of alumalite. Painted aluminum face with corrugated plastic core (1 side) white aluminum face with flat silver back. Great for photo mounting, billboard fascias and wall-mount signs. **(discontinued, see PolyMetal)**

**HI-WAY HDO:** High density overlay panel designed for applications of reflective film for hi-way signs; it is ideal for state, county and municipal signage. Extra care is taken to minimize core gaps. There is no preparation before applying film or paint. Excellent for vinyl graphic applications.

**LUSTER BOARD:** Exterior fir plywood with 15 gauge white painted aluminum on both sides. Extra care is taken to minimize core voids. Great for post and rail signs, signs that use cutout shapes, portable displays, sandwich boards, hanging signs and A-frames. Edges must be end-capped.

**MDO GUARDIAN:** Medium density paper overlay on top of exterior fir plywood used for sign painting or exterior construction. Has a nice paintable surface. The two-step process includes the plywood substrate being sanded before overlay is applied to minimize grain and patch show-through. Guardian is the standard grade, telegraphing is more prevalent than in our Signal board.

**MDO SIGNAL:** Premium grade medium density paper overlay. The core is exterior fir plywood with an outer layer of exterior luan on front and back (under paper overlay) to prevent grain telegraphing. The Signal grade uses premium face veneers and a solid core. Offers fewer (and tighter) core gaps giving the least amount of edge voids for better machineability and weatherability. Used for applications where a smooth painted surface is essential. Also used for exterior construction ie. sills and soffits.

**MDO PRIMED:** MDO primed (grey primer applied in anticipation of first layer of paint). High performance overlay impregnated with a thermoset acrylic primer. This helps reduce production time and provide a uniform prime coat.

**OMEGA BOARD:** Plywood with white vinyl coating on 2-sides. This is a less expensive alternative to luster board. **(discontinued)**

**POLY-METAL:** Aluminum covered composite board. Very rigid and lightweight with a solid core that stands up very well to weather. Used for signs or wall applications. Available in 1/8" white, almond, black, blue and brushed silver.

**URETHANE FOAM:** Urethane foam board with its closed cell construction is used as an alternative to red wood (very expensive) for carved signs. Urethane foam is used for carved signs, carved letters and various other carved and sand-blasted applications. Works extremely well on CNC routers.

## Other Products: Definitions & Applications

**MDF:** Medium density fiberboard is manufactured from pressure-cooked wood chips, which are broken down into fibers and combined with resin and wax and pressed into panels. The compressed fibers make it very dense. It is a less expensive alternative to plywood, used in many applications, ie. cabinets, shelving and as a substrate for laminate and veneers (interior use only). However, it is much heavier than plywood (95lb's for 3/4" 4x8 panel) and has inferior screw holding capabilities compared to standard veneer core plywood. If it gets wet it may swell. The MDF core plywood has outstanding surface smoothness that prevents grain telegraphing. It is true to thickness. Edges can be routed into many different profiles.

**ULTRALIGHT MDF:** Medium density fiberboard that is ideal for lightweight projects such as moldings, picture frames, suspended ceilings, indoor paneling, etc. This is 30% lighter in weight than standard MDF and less dense because more air is utilized in the manufacturing process and it puts less wear on machines and tools. Manufactured with Radiata Pine. A possible drawback may be fuzzy edges due to machining (in comparison to standard MDF or ULTRA). Sold in metric sizes. Available in 12mm (1/2") to 38mm (1-1/2").

**ULTRA MDF:** Double-refined medium density fiberboard. This product is more heavily machined to provide a more consistent cut (it has the same consistency throughout the entire piece). This is ideal for raised panel work where you would see the side profile. Edges can be routed into many different profiles.

**CABINET LINER:** Simpson cabinet liner is a ready-to-use polyester resin overlaid fir plywood panel designed for case and shelving applications in cabinetry, fixtures and furniture. It is an excellent choice for doing interior shelves. Much better screw holding capacity and stays flatter than particleboard core (available in white and black).

**CORKBOARD:** 1/8" cork adhered to homasote. Perfect, high quality, hassle-free product for home or office.

**HARD-BOARD:** Dense pressed wood fibers used for casework, underlayment or economical painting surface.

**HDO 100/100 (concrete form):** Exterior fir plywood with a high-density overlay that gives the most durable, reliable concrete forming finish on the market. Releases from the concrete cleanly and easily. Can be reused for numerous pours.

**HOMASOTE:** Used in place of plywood for carpet underlayment, partitions, sidewall sheeting, signs and tack boards. It is composed of compressed cardboard, without any knots, voids or splinters.

**LAMA-BOARD:** White laminate on plywood (poplar core), used for a variety of applications such as shelving, case work, countertops, etc. This board is ready to go and will reduce labor \$.

**MEDEX:** Formaldehyde-Free MDF that will work well in applications where moisture is a concern. It can be used in the following non-structural applications: countertops, baseboard and decorative cap moldings, window sills, display cases, lawn ornaments, raised panel inserts, garage door panels and display exhibits. Medex is recommended for use in: schools, museums, day care centers, medical and dental facilities, retirement homes, laboratories and toys. It is formaldehyde free!

**MELAMINE:** Thermal fused paper on particleboard (white, almond, grey, black and different tones of maple). Inexpensive alternative to plywood for shelving and cabinet making. However, it is much heavier, scratches easier, cannot be repaired and has inferior screw holding capabilities compared to veneer core plywood and cabinet liner.

**PARTICLEBOARD:** Constructed from wood particles being blended with resin and wax and pressed into panels. It does not machine as well as MDF or veneer core plywood and is also rather heavy (approximately 95lb's per 3/4" 4x8 panel). It is a less expensive alternative to veneer core and MDF. Used for countertop underlayment because of the price, flatness and the availability in various sizes.

**T 1-11:** Exterior siding used for applications such as siding, barns and sheds.

## Veneer Cuts

### **Rotary-Cut**

Rotary-Cut veneers are characterized by a bold, sometimes wild grain pattern, typically used in applications where matching is not important. During production, a log is spun on its long axis as a razor sharp knife is moved toward its center. This allows the veneer to peel off in one continuous sheet, or whole piece face (WPF); much like a paper-towel being unwound from a roll. Common Rotary-Cut, hardwood plywood is Birch, Oak and Maple.

### **Plain-Sliced**

Plain-Sliced veneers, also referred to as Flat-Cut, are typified by straight grain patterns mixed with cathedrals. A half-log is mounted on a steel rack and moved up and down towards a stationary knife, allowing for a number of parallel cuts. These splices are pieced together side-by-side, length-wise to form the face of the veneer. Plain-Sliced hardwood plywood is available in most hardwood species.

### **Quarter-Sawn**

Quarter-Sawn veneers are characterized by a straight grain and/or ribbon striped appearance. This style of veneer usually comes from hardwoods that have distinctive annual growth rings such as maple, oak, sapele, mahogany, anigre and zebrawood. The veneers are produced when the log is mounted, so that it strikes the knife at a right angle to the growth rings. The edges of these rings cause the straight grain appearance of the veneer (oak will contain flaking).

### **Rift-Sawn**

Rift-Sawn veneers have a straight grain pattern similar to Quarter-Sawn. Rift-Sawn veneers are produced when the log is mounted so that it strikes the knife at an angle, 15° off the Quarter-Sawn position. This causes a straight grain pattern ( this process minimizes the appearance of flakes in oak, which results from cutting across the medullary rays). The most common Rift-Cut hardwood plywood is Oak, but it is also available in other species.

## Core Constructions

### **Veneer Core**

Constructed from softwood cross-band inner-plies, veneered with decorative hardwood plywood veneers. Structural strength, stability and its moderate price are reasons why it is the most common core type. Veneer Core is strong, light, has excellent screw-holding capabilities and is well suited for cabinets, built-ins and casework.

### **Mende Core**

Constructed of veneer core inner-plies, with 1/8" layers of MDF between the face/back veneers and the veneer core inner-plies. This is a relatively new core that combines the screw-holding capabilities of veneer core plywood, while offering a very smooth surface for the decorative hardwood veneers to lay flat and prevent grain transfer. It offers the best of both worlds; the only drawback is the weight (85lb's per 3/4" 4x8 panel). We currently stock Mende Core in 3/4" Cherry, Maple, Walnut, Curly Maple and Mahogany.

### **MDF Core**

Medium Density Fiberboard is manufactured from pressure-cooked wood chips which are broken down into fibers, combined with resin and wax and pressed into panels. The compressed fibers make it very dense. It is a less expensive alternative to plywood, used in many applications, ie. cabinet door panels, wall panels and shelving. However, it is much heavier (98lb's per 3/4" 4x8 panel) and does not hold screws as well as veneer core plywood and may swell when it gets wet. It can be machined or sanded to a smooth finish. MDF core has outstanding surface smoothness that prevents grain telegraphing.

### **Lumber Core**

Constructed from sawn wood or sliced boards three to four inches wide and of random length. It is joined at the edges with pressure sensitive glue and sanded to a uniform thickness. It is known to have a solid core and is used primarily for door panels. Our Lumber Core is normally manufactured with cross-bands of aspen lumber. We stock 3/4" 4x8 Red Oak, White Birch and Cherry Lumber Core.

### **Particleboard Core**

Constructed from wood particles being blended with resin and wax and pressed into panels. Because of the larger wood particles it does not machine as well as MDF or veneer core plywood and is heavy (98lb's per 3/4" 4x8 panel). It does not hold screws particularly well in comparison to veneer core plywood and it will swell when it gets wet. Raw particleboard is used for countertop underlayment because of price, flatness and availability in a variety of sizes.

## Face Veneer Grades

- \*AA** Premium face grade for high-end projects where appearance is extremely important; allowing the smallest amount of imperfections. AA grade veneers are best utilized for high quality cabinetry, built-ins, fine furniture and architectural paneling.
- A** Where AA is not required but appearance is still very important.
- B** Natural characteristics of the species are more prevalent and desirable.
- C** Allows for unlimited color and increased natural characteristics. Perfect for applications where an economical panel is needed.
- D** Provide sound surfaces but allow unlimited color variation; permits repairs in increasing size ranges. Our manufactured "shop grade" birch and maple typically has a paintable face (although imperfections are present and may include small putty-filled knots). Shop is best utilized when surface appearance is not of great concern.
- \*** Our normal stock for the following hardwood plywood is AA-1 Grade (1/2" & 3/4" 4x8VC): Alder, Anigre, Ash, Beech, Bamboo, Birdseye Maple, Curly Maple, Butternut, Cherry, Vertical Grain Fir, Clear Pine, Khaya & Sapele Mahogany, Plain-Sliced Maple, Pecan, Walnut, Quarter-Sawn, Rift-Sawn and Plain-Sliced Red & White Oak. This merchandise is manufactured by Mt. Baker; a premium quality mill in Bellingham, Washington. We state these products in the price list as A-1. (There are times on occasion when we purchase the material from other suppliers. In those instances the material would be A-1 grade.) Please feel free to inquire with any questions regarding veneer grades.

## Back Veneer Grades

Grades on back veneers are designated 1 through 4. A back veneer with a grade of 1 would be the most restrictive in regards to imperfections, with grades 2, 3 & 4 being progressively less restrictive. Grade 1 and 2 backs are extremely sound, with nearly all openings in the veneer repaired. Grades 3 and 4 permit some open defects.

## FAS Grade Lumber

We stock a high grade of lumber; FAS (First & Second) when available. All of our lumber is sold in random width, random length designation, as opposed to dimensional. It is available in S2S (surfaced 2-sides) & RGH (rough) in most species. Most of our boards are 4" to 10" wide and 8' to 12' in length.