

A Guide to Specifying Motion I

Division 6 (6400 Architectural Millwork)

Specific lead times are determined upon receipt of both the deposit and approved shop drawings. Lead times are based on a “first come first served” basis and are solely dependent upon our current work load, available stock, special core or finish requirements and size of project. Interlam does not charge nor accept additional charges to rush orders. All orders will be manufactured as fast as possible in the order they are received.

The Motion I wall panel product offers the customer an extremely broad variety of patterns, materials, finishes and installation choices. In order to translate a customer requirement into an accurate product specification, it is important to understand all of the product options and terms used to describe these options. Product specification terms and options are discussed below.

It is important to first select a core material based on specific project needs, such as contribution towards "Leed" credits, FSC Certified fibers with COC, Class A fire rating, radius applications or formaldehyde emissions. Materials are available to fit most special needs such as radius or serpentine installations, wall dividers, cabinet or entry doors or furniture component parts. Not all materials are available in all sizes, finishes and or patterns. Consult the specific pattern page to determine available thickness, finish and sheet size for each individual product. Lead times will be increased if a non-stocked product or thickness is required for any given job.

Panel Thickness:

Panel thickness refers to the thickness of the finished product. The thickest area of the panel will be slightly less than this nominal panel thickness. Panel stock thickness ranges from 1.2mm to 19mm. Many factors will determine the final panel thickness such as Pattern choice, installation methods and material availability.

1.2mm (.0472") x 1250mm (49.212") x 2500mm (98.425") This consists of two layers of .6mm veneer sheets laminated together to achieve 1.2mm thickness. This textured Motion I sheet may then be laminated by the customer or Interlam to various cores and thicknesses with backers to achieve the desired design intent.

4mm (.1574") x 1220mm (48.0315") x 2440mm (96.062") This consists of 1 top layer of Textured Veneer, a 3mm HDF core and a back layer of an un-textured B-grade mill choice veneer. This can be used as wall panels, components or laminated to other substrates.

19mm (.748") x 1220mm (48.0315") x 2440mm (96.062") This consists of 1 top layer of Textured Veneer, an 18mm HDF core and a back layer of an un-textured B-grade mill choice veneer. This can be used as wall panels or components.

Flame Spread Performance of MDF / IDF Wood Panels:

Unless otherwise stated, Interlam's IDF Motion I panels are not certified for a specific flame spread rating. Untreated [2] MDF has been tested for flame spread by a number of different manufacturers and the results met the Class III or C rating. The Department of Housing and Urban Development(HUD) in their Manufactured Home Construction and Safety Standards(Section 3280.203) accepts MDF 3/8 inch and thicker as having a flame spread rating of 76 to 200 for general use. The American Wood Council (AWC) of the American Forest and Paper Association (AF&PA) has published information in their "Design for Code Acceptance" series (DCA1) relating to Flame Spread Performance of Wood Products. The document can be found at www.awc.org. Table 1 in that document places MDF in the Class III or C rating. Likewise, Table 2 in that document places factory finished products (i.e. printed or with overlays) containing untreated particleboard and MDF substrates in the Class III or C flame spread rating. Smoke data specific to every product is currently not available; however other manufacturers have found typical values of 100-200 for smoke developed. The AF&PA document states that "a smoke-developed index was measured for some of the wood products listed in Tables 1 and 2". None of the products tested exceeded 450, a limiting value commonly used in building code regulations. Interlam's MDF treated with fire-retardant [3] (FR) additives are certified by Underwriters Laboratories to have a Class A or Class I flame spread rating and must be specifically ordered as an available option with an up charge.

[2] Without a fire-retardant additive-Interlam reserves the right to substitute similar core based on availability

[3] Trade names: Premier® FR, VESTA FR MDF - Interlam reserves the right to substitute similar core based on availability

Color Consistency of Motion I Products:

Motion I is not a finished product and, therefore, its resistance to light also depends on the cycle and chemical nature of the finish. The buyer is advised that discoloring may occur. It is recommended that the buyer performs preventive tests according to the particular purpose and intended use, in order to optimize results. Being a natural wood product, Motion I may vary with respect to its reference color and or submitted prior sample. It is recommended that the buyer checks before use both the color and the grain of the product delivered as against the ordered product. The use of pigments with similar shades to the veneer base color is always recommended to achieve a more uniform appearance.

Finishing

Like all other types of wood, the finishing process of Motion I must be done with a suitable product, capable of protecting and preserving the wood as much as possible from chemical and physical deterioration (photo degradation, thermal decay, etc.) as well as from mechanical degradation (scraping, crashes, etc.). Multilaminar wood can be stained without any particular problems, and it is advisable to do it.

Motion I can be finished with any product or method recommended for wood treatments. However, the best results are achieved by selecting, among the different classes of products, those having the following characteristics:

- High wetting power
- Good properties retention yellowing
- High UV protection

As for latex finishes, it is advisable to use products, which are stable at a moderately acid pH (4-6), such as some specific products designed for acid hardwood.

It is always good practice to follow strictly the instructions provided by finish producers and to carry out preventive tests before proceeding to finishing.

The information and recommendations herein have been compiled from the current information owned by Interlam and may be susceptible to changes if new knowledge or new production systems are available. Users are advised to make their own determination as to the suitability of this product in relation to their particular purpose and intended use.

Pattern Name:

Every pattern has an identifying name such as "Absinthe", "Brandy" or "Cognac" etc.... The pattern choice is the second step after choosing a material thickness or core. A full page is dedicated to each pattern online at www.interlam-design.com/products/motion/ complete with pattern characteristics and photos of the actual product. Do not place an order without requesting a sample and verifying the scale of the pattern. A dime has been included in the pattern shots for use as scale; however this alone cannot give a true representation of the pattern appearance.

Panel Size:

The standard panel size is 48" x 96" (4' x 8'). Please contact Interlam to determine material availability for custom projects. For multiple panel cut-to-size projects, please forward a dimensioned layout via e-mail to eddie@interlam-design.com in any of the following formats: .DXF, .DWG, or PDF files. DWG files are preferred.

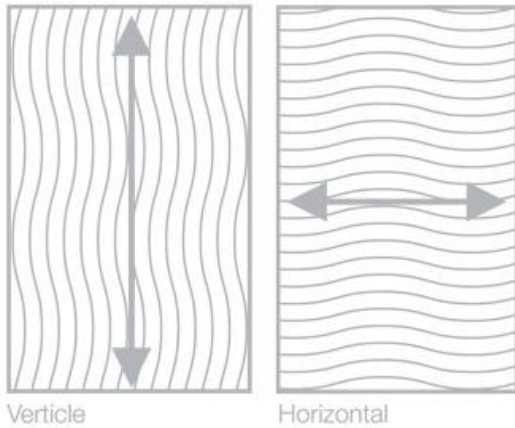
Pattern Depth:

The pattern depth refers to the deepest cut that is made in the raw stock in order to produce the pattern. Most patterns are offered in only one depth; however a few have multiple depth options as indicated on the specific pattern page.

Pattern Direction: EXTREMELY CRITICAL!!!

Most patterns can be produced in either vertical or horizontal orientation. Referring to the illustration, a pattern is said to be horizontal if the tool marks run generally in the short direction and vertical if the tool marks run generally in the long direction. Please note that the vertical and horizontal designations have nothing to do with the installed orientation. For multiple panel layouts or panels that are approximately square, orientation should be

indicated in an attached layout sketch. The direction of some patterns is not always obvious, so please refer to individual pattern photos in the catalogue to determine the preferred orientation. As a general rule, the grain direction of the veneers will run in the same direction of the patterns.



Pattern Repeat Type:

Motion 1 patterns do not repeat. The pattern is random and a reveal should be designed into the wall panel layout.

Recommended Thickness - The thickness given for each pattern refers to the material from which the pattern can be finish textured. Panel thickness should be specified based on the design intent and final purpose ranging from 1.2mm , 4mm or 19mm. The 1.2mm and 4mm thicknesses can be glued to any array of substrates and thicknesses and completed through a third party millworker.

Installation Methods:

The following information is a compilation of published information pertaining to the use and application of textured MDF/IDF products. This publication is intended to serve as an informative tool and a “sharing of information” rather than a strict directive. Each application will have unique circumstances and varied site conditions resulting in an assortment of available techniques and practices to achieve the same result. MDF/IDF products have a possible linear expansion of +/- .33%. Wood is a hygroscopic material, and under normal use conditions all wood products contain some moisture. Wood readily exchanges this molecular moisture with the water vapor in the surrounding atmosphere according to the existing relative humidity. In high humidity, wood picks up moisture and swells; in low humidity wood releases moisture and shrinks. As normal minor fluctuations in humidity occur, the resulting dimensional response in properly designed construction will be insignificant. To avoid problems, it is recommended that the relative humidity be maintained within the range of 25-55%.

Uncontrolled extremes – below 20% or above 80% relative humidity-can likely cause problems. Immediately upon receipt of your order, the panels should be placed in a climate-controlled environment and allowed three days to acclimate to the existing relative humidity (within the above stated ranges). It is very important to note that the panels must be stored flat to reduce the bowing and warping. When MDF/IDF panels are textured, the surface area of the panel face is increased and creates an “unbalanced panel effect”. The level of this effect varies depending upon pattern and board thickness. The natural “bow” or “warp” is common to all MDF products and not inherent specifically to our products. This condition is slight and can be compensated by proper installation techniques, some of which are discussed in this bulletin.

Our Textured MDF/IDF Motion I wood products are manufactured from recycled/recovered wood chips dried to appropriate average moisture content of 4-6% and maintained at this condition up to time of shipping. Interlam cannot control the conditions the panels are exposed to during the storing and shipping process. Subsequent dimensional change in MDF/IDF is and always has been an inherent natural property of composite panels. These changes cannot be the responsibility of the manufacturer. Specifically:

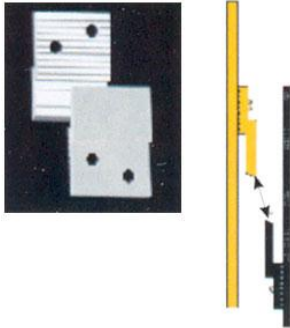
- Responsibility for dimensional change problems in MDF resulting from improper design rests with the designer/architect/specifier.
- Responsibility for dimensional change problems in MDF resulting from improper relative humidity exposure during site storage and installation rests with the General Contractor.
- Responsibility for dimensional change problems in MDF resulting from humidity extremes after occupancy rests with engineering and maintenance.

The following paragraph **does not** apply to Motion I Veneered panels:

All orders finished "In House" will have a clear lacquer sanding sealer on the back of the panel and the specified finish in either a lacquer or latex finish on the face and all edges. All orders placed as "prime and sand" only will have a lacquer based primer applied as a standard unless otherwise noted at the time the deposit is received.

Sealing the back is imperative to reduce the possibility of excessive bowing and warping. All panels ordered as raw or unfinished, **MUST BE SEALED OR BACK PRIMED** prior to installation!! Failure to seal the back will allow moisture to be released and or absorbed from one side, resulting in excessive warping.

Due to the manufacturing methods used to produce Motion 1, most thin panels will have a slight "bow" or "warping" in them. This is considered normal and can easily be removed using the installation methods below.



Z-Clips:

Z-Clips may only be used if there is sufficient material thickness to allow screw attachment of the clips to the Motion I panel. Ideally, the panels should be specified thick enough or with a thick enough backer to accommodate the screws that are to be used. Z-Clips should run the full panel width to insure adequate support across the entire panel. A minimum of three (3) rows of z-clips are required per 8 foot high panel. Adding a fourth row may be required depending on the pattern and panel thickness specified. The rows should be situated at the extreme top and bottom of the panel with the remaining rows centered. Plywood or solid wood "in-wall" blocking is required with metal stud construction and recommended with wood framing. Z-clips are available for purchase from Interlam. Estimate 4pcs (8 foot lengths) per 4 x8 Motion I panel. The z-clip is shipped in 8' lengths without bored holes. Price \$12.00 each (\$48.00 per sheet)

Construction Mastic:

A high quality construction mastic such as "Liquid Nails" or a "PL" Mastic such as "PL Premium Polyurethane" www.stickwithpl.com can be applied to the back of the panels and then pressed onto a structurally sound surface * A structurally sound surface for the purposes of this installation would be a wall skinned in 12mm Baltic birch plywood. Interlam does not recommend using this method to apply directly to drywall or painted surfaces. (follow construction mastic manufacturer's application instructions). Panels must be mechanically held in place until mastic is completely set. The installer **MUST** insure the panels are completely flat and aligned prior to the mastic curing. Improper placement using this method will result in a permanent incorrect installation with bowing or cupping on all sides at joints.

Direct Screw Attachment:

Motion I may be attached to a supporting structure by screwing directly into the panel back. As is the case with Z-Clip installation, the panels should be specified thick enough or with a thick enough backer to accommodate the screws that are to be used. Construction mastic should also be used in conjunction with this technique. Bondo or similar auto-body fillers, wood putties or wood fills **ARE NOT RECOMMENDED** for the filling of seams between each panel. Based on the inherent linear expansion properties of MDF/IDF products, reveals or quirk lines must be utilized in the absence of a caulked joint to allow for movement. With the proper technique, the seam will be visually pleasing; however it will never be invisible.

Seams:

Prefinished panels will have noticeable seams due to the finish buildup on the edge of each panel. The pattern will not repeat from one to another, however depending upon the pattern and pattern direction relative to the seam location, the severity of the seam visibility will vary. Some patterns allow the seam to be hidden within the patterns, while others may require the seam to be placed against the direction of the pattern and be more noticeable. It is recommended that the designer contact Interlam Corp. prior to specifying a pattern or specific installation technique to achieve the highest level of design intent. During this contact, the specifier should provide the following information:

- Complete layout in AutoCAD of the specified area only, including plan, elevation and section
- A selection of patterns being considered with *desired pattern direction*
- Desired finish
- Installation technique being considered
- Site conditions
- Specific core requirements I.E. fire rating, LEED's, CARB etc....
- Corner conditions

Consideration of all the aforementioned elements will allow Interlam to determine a suggestion for optimal placement of material seams and methods of installation.

The installation of "Motion I" requires more than a basic knowledge of rough carpentry and should only be performed by a certified AWI millwork company. Special conditions such as miter corner conditions, radius applications, custom shapes etc... should be addressed during the initial design phase.

FURTHER QUESTIONS SHOULD BE DIRECTED TO: eddie@interlam-design.com