InteriorArts Technical Information Guide

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InteriorArts

InteriorArts®

Product Reference 2020

InteriorArts is a high pressure laminate sold in standard size sheets. Numeric codes represent product number, letter codes refer to texture. NAT or "Natural" is flat or standard laminate texture, other codes represent other textures. The best way to determine texture preference is to obtain a sample from us. Product number/texture combos shown here are standard, custom combos are available with 100 sheet minimums and 3-4 month lead time. Limitations apply.

New 2020 Collection - 20 designs

IA #	Name	4' x 10'	.031"
#6001 MAT	White Matte*	•	•
#6002 MAT	Black Matte *	•	•
#6003 MAT	Grey Matte*	•	•
#6011 INT	White Intel	•	•
#6012 INT	Black Intel	•	•
#6021 TER	White Terra	•	•
#6024 TER	Fleck Terra	•	•
#6025 TER	Buff Terra	•	•
#6034 CDX	Washed Codex	•	•
#6035 CDX	Umber Codex	•	•
#6036 CDX	Khaki Codex	•	•
#6037 CDX	Bronze Codex	•	•
#6040 BIS	Brushed Bisect	•	•
#6044 BIS	Deep Bisect	•	•
#6045 BIS	Bronze Bisect	•	•
#6050 ORG	Euro Oak Organic	•	•
#6054 ORG	Wide Walnut Organic	•	•
#6060 MOD	White Oak Mode	•	•
#6064 CON	Subterranean Concrete	•	•
#6070 FSH	Black Fresh	4' x 9'	•

2020 Collection

Technical Specs: More info at ialaminates.com. InteriorArts is an HPL design laminate ideal for vertical and light duty horizontal use in interior spaces. It should be adhered to a substrate panel.
Thickness: .031" (New 2020) and .034" (Standard Collection). Items noted with * (6001, 6002, 6003) are matté, anti-fingerprint designs with improved scratch resistance.
Note 1: #6070 Black Fresh is available in two sizes: 4' x 9' and 28.875" w x 9'.
Note 2: All "New 2020" Sheets are European size and of greater than 48" width, between 49" and 51".

Standard Collection - 29 designs

IA #	Name	4' x 8'	.034"
#1002 DZL	Black Drizzle	•	•
#1002 STK	Black Streak	•	•
#1002 VEL	Black Velvet	•	•
#1003 BRU	Slate Brushed	•	•
#1040 MCR	White Needle Microline	•	•
#1040 NAT	White Needle Natural	•	•
#2003 CEM	Toba Cement	•	•
#2004 CEM	Sumatra Cement	•	•
#2005 CEM	Cracked Cement	•	•
#2006 CEM	Cracked Sand	•	•
#2023 LIN	Ash Veil	•	•
#2031 GMS	Midnight Mica	•	•
#2070 NAT	Brushed Alumina	•	•
#3007 NAT	Cali Oak Natural	•	•
#3008 VNZ	Cali Oak Veneer	•	•
#3010 VNR	Koh Teak	•	•
#3012 STK	White Spruce Streak	•	•
#3021 STK	Electric Grey Streak	•	•
#3023 WAV	Bronze Walnut Wave	•	•
#3025 CRV	Grey Oak Cross Curve	•	•
#3040 NAT	Silver Oak Natural	•	•
#3041 NAT	Pure Oak Natural	•	•
#3043 VRT	Pho Bamboo Vertiline	•	•
#3086 WAV	Strada Oak Wave	•	•
#3087 WAV	Playa Tropical Wave	•	•
#3094 MCR	Black Oak Recon	•	•
#3102 VNR	Rancho Walnut	•	•
#3103 VNR	Marin Walnut	•	•
#3104 VNR	Eastern Walnut	•	•

Standard Collection

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Technical Data

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Revised 10/2018

Product Description:

InteriorArts HPL design laminate is a high pressure plastic laminate manufactured for use as a durable decorative surfacing material in commercial and residential interiors. InteriorArts hpl design laminates offer excellent wear, impact and stain resistance.

Size: 4’ x 8’
Thickness: .028” and .034”
Weight: 6.5 lbs per sheet.

InteriorArts is suitable for vertical and light duty horizontal installations. Typical vertical applications include wall panels, cabinetry or casino, retail, corporate, office, elevator, restaurant, hospitality settings and more. Because of thickness and textured designs, it is not recommended for heavy wear countertop applications.

Our strong bonding process makes our laminates resistant to boiling water and stains and provides increased dimensional stability. Surface protection through special treatment makes InteriorArts laminates scratch resistant.

Product Composition:

InteriorArts HPL design laminate is manufactured by laminating phenolic resin impregnated kraft paper sheets (backer) to melamine resin impregnated specially selected decorative papers (surface). These are then pressed and hardened under heat, and high pressure, trimmed, with the backside sanded to aid installation.

Advantages:

- GreenGuard certified.

Custom Finishes: Natural, Hi Gloss, Velvet and Flame textures are also available by custom order in 4’ x 10’ sizes. 100 sheet minimums and different lead times apply.

Laminate Grade: InteriorArts hpl laminates are sold as .028” and .034” thickness, depending on product. Thinner .028” laminates can be slightly more cost-effective and offer the same surface durability, but less than maximum impact resistance.

Custom Thickness: Other thicknesses, up to .048” available by custom order. 100 sheet minimums, 3-4 month lead times and different costs apply.

WARRANTY DISCLAIMER AND LIABILITY:

The information in this Technical Information Sheet and all related documents released by InteriorArts is believed to be reliable, but InteriorArts disclaims the creation of any expressed or implied warranty including the warranties of merchantability and fitness for a particular purpose with respect to InteriorArts products. In all cases, users must determine the suitability of such products for any particular use and shall assume all risk and liability whatsoever in connection herewith.

Since we exercise no control in handling, storage, application and use of these products or the products of others with which they are used in combination, no warranty, express or implied, is made as to the results and effect of their use. User must also establish his or her own procedures and verify the finish of any product to be as ordered before use. We recommend testing all procedures before beginning production or installation. Buyer's exclusive remedy for a loss or claim resulting from the use of InteriorArts products shall be replacement of product proven to be defective. In no event shall the Seller be liable for any special, incidental, consequential or exemplary damages.

Storage:

Sheets should be stored horizontally with the top sheet turned face down and a thick hard board placed on top to protect the material from possible damage and reduce the chances of getting warped. Stored laminate stock should be rotated, so older sheets will be used first. Laminate sheets should be protected from moisture, and should never be stored where they may come in contact with the floor or outside wall. Always carry the sheets vertically. Never slide the sheet, always lift it while moving it from one place to another. We recommend that ideally two people should carry a full size sheet, as carelessness can damage the decorative surface.

Protective Film:

Gloss laminates are supplied with a protective film. The protective film should be removed as soon as the application is complete. If the film is left in place after fabrication, exposure to strong lights for a period may cause a pale residue and make it difficult to remove the protective film.

Laminate Fabrication:

Proper construction standards must be followed and are summarized and detailed below. NEMA offers excellent standards and guidelines for laminate construction that should be followed in all projects.

- Acclimate or Precondition Materials
- Balanced Construction
- Thick Core vs. Thin Core
- Laminate Expansion and Allignment
- Laminate Spacing Between Panels
- Laminate Adhesives
- Unsuitable Balancing Techniques

Acclimate or Precondition Materials:

High pressure laminates should be properly conditioned to the ambient conditions of the surroundings before they are used. For example, high pressure decorative laminates and the substrate need at least 48 hours to get acclimatized. Provision should be made for the circulation of air around the components. Recommended conditioning temperature is about 24°C or 75°F. Laminates should be conditioned at 45% to 55% relative humidity.

All panel components should be acclimated to the same environment prior to assembly. This will ensure that one component will not be contracting while the other is expanding due to subsequent relative humidity changes.

Balanced Construction:
For critical applications requiring a well-balanced assembly (doors, etc.), the same laminate should be applied on both sides. Less critical or smaller applications may only require a cabinet liner or phenolic backer.

Thick Core vs. Thin Core:
Thick panels warp less than thin panels due to increased rigidity and the geometry of the forces involved. For critical applications, the thickest core material permissible should be selected to help minimize warpage.

Laminate Expansion and Alignment:
Laminates expand and contract twice as much in their cross-grain direction as they do in their grain (parallel with the sanding lines) direction. Always align the sanding lines of the front and back laminates in the same direction and, wherever possible, align the grain direction of the laminate with the longest panel dimension. It is also advisable to align the grain and cross-grain directions of the laminates with that of the substrate. Note: When multiple panels are viewed together, keep all laminate components aligned in the same direction to minimize visual changes in color or gloss due to the directionality of the underlying surface paper and laminate finish.

Lamination Spacing Between Panels:
Installed laminate-clad panels will expand and contract with humidity changes. Provide sufficient spacing between panels to allow for this. Panels or countertops that are locked between two walls or other such restraints should have a sufficient gap allowed to accommodate dimensional movement. Wider panels and higher humidity swings require more spacing. A general rule of thumb is to allow 1/8” (3.18mm) minimum between panels having widths of 48” (121.9cm).

Lamination Adhesives:
Use the same adhesive and application techniques (application rate, method of application, drying techniques, etc.) for bonding the front and back laminates. This is especially important when using water-based adhesives such as PVA (white glue), ureas or water-based contacts which introduce additional moisture into the panel assembly. In addition, if panels are being hot pressed, the top and bottom platen temperatures may require temperature adjustments to produce flat panels. Temperatures used to effect glue line cure can cause shrinkage of the glue and surfacing materials. Generally, the side having the thicker skin will require a slightly higher platen temperature than the side having a thinner skin (cabinet liner, phenolic backer, etc.), due to heat transfer rates. Bottom platen temperature may also require reduction to compensate for the additional contact time involved while the press is being closed and opened.

A variety of adhesives have been found satisfactory for bonding decorative laminates to core materials. The choice of adhesive should be based on the service for which the assembly is intended and upon the bonding facilities available. In all cases, the adhesive manufacturer's instructions for use should be followed closely.

Contact Adhesives: Contact adhesives may be used for bonding laminates to a variety of substrates. Contact adhesives do not restrict the movement of the laminate caused by varying humidity conditions to the same extent as thermosetting adhesives. They are particularly useful for application to metal or other impervious surfaces. There are two primary types of contact adhesives; solvent based and water based. Water based adhesives are not suitable for bonding laminates to non-porous substrates. The solvent or the water must be evaporated before satisfactory bonding can be accomplished.

Polyvinyl Acetate Types (White glue): Polyvinyl acetate (PVA) emulsion adhesives may be used for bonding laminates to wood substrates where resistance to moisture and high heat are not required in the application (e.g. furniture, kitchen cabinets and office partitions).

These may be both room temperature and hot pressed setting adhesives requiring only that the water in the emulsion be absorbed by the components. Catalyzed PVA offers improved moisture and heat resistance.

Thermosetting Types: Urea-formaldehyde adhesives are satisfactory for most applications. Resorcinol and phenol-resorcinol adhesives are recommended for use when moisture resistance and heat resistance are required. Epoxy adhesives are liquids with no volatile components. They have good gap filling and low shrinkage properties and are used mainly for bonding laminates to impervious cores such as steel.

Hot Melt Types: Hot melt adhesives are suitable for use only in edge banding operations because of their low heat resistance.

Urethane Types: Urethane adhesives are liquids with 100% solids and no volatile components. They have good gap filling and low shrinkage properties. These are used mainly for bonding laminates to impervious cores such as metal, glass etc.

Unsuitable Balancing Techniques: Moisture barriers such as paint, varnish, vinyl film, and other coverings including impregnated fiber backers will not balance a panel having a laminate on the other side. Coatings or materials of this type do not exhibit the same strength or dimensional change characteristics as a laminate. Remember, the strength and expansion/contraction rates of the face and back skins must be matched for proper balancing.

Tooling and Cutting:

Sawing:
To avoid chipping, it is important that the saw blade teeth cut into the decorative face, with laminate surface face down.

Circular Sawing:
Always provide support to the material near the point of blade contact to avoid vibration that causes chipping. Blades with trapezoid tooth configuration and both tungsten carbide and diamond tip blades have proved to be excellent tools for sawing high pressure decorative laminates.

Routing:
Routing may be done with electric or air powered carbide tip routers. Router speed should be maintained at 16000 to 22000 rpm. It is important to use a router having adequate horsepower to maintain cutting speeds (based on the type and amount of material to be cut). For special edge trimming, very high speed routers are available which produce smooth-edge, chip-free work. Sharpness of the router cutters should be maintained.

Edge Finishing:
Belt sanders may be used to flush the self-edge before the laminate top is applied. However, care should be taken to direct the sanding operation away from or parallel to the decorative surface.

Substrate Preparation and Bonding Techniques:

• Proper substrates must be used and careful bonding procedures observed. Substrates should be good quality plywood, high density particle board, high quality fiberboard or MDF. Acrylics can be a suitable substrate, especially in smaller sizes, like in retail fixturing. The more resistant the substrate is to dimensional change (shrinkage and/or expansion from changes in humidity and temperature) the better the long term results. Sheet rock is not a recommended substrate. Its surface is too irregular, it will project imperfections and it eagerly absorbs water and distorts.

• Surfaces should be clean, dry and free of oils or other contaminants, such as dust, synthetic particles, and so forth. The adhesive film should have full contact with the surface to which it is applied in order to give maximum adhesion.

• The adhesive should always be stirred or agitated before use. Sufficient adhesive should be applied on either or both the surfaces to be bonded. When ready for bonding, most contact adhesives will exhibit a uniform semi-gloss appearance over the entire surface of the materials to be bonded. Marked variation in appearance will generally indicate an improper or non-uniform adhesive spread. The substrate can generally be seen more readily through those areas where insufficient adhesive has been applied. If this occurs, re-coating the surfaces should achieve a uniform coating. Double coating the edges with adhesive is advisable because of the higher porosity of the substrate edge.

• Sufficient bonding pressure to ensure intimate contact is necessary for an adequate bond. Sufficient pressure should be applied over the entire area using as much pressure as possible without damaging the assembly. Pinch rollers (rotary press) and heavy weighted rollers are ideal for such purposes. Hand rolling should be done from the center to the edges to ensure the removal of all air bubbles. The edges should be rolled twice.

• Care should be taken to follow the manufacturer's recommendations concerning the allowable tack range of the adhesive. If assembly is made before the adhesive is dry or after the allowable open time is exceeded, the bond may not have satisfactory results.

• Unless otherwise indicated by the manufacturer, the temperature of the gluing area and all materials should be maintained around 21°C (70°F) or above.

• Experience has shown that when the relative humidity is above 80% at temperatures of 21°C (70°F) or lower, moisture may condense on the surface during drying (known as blushing) and this will prevent an acceptable bond. Hot spray or forced air drying may be used to help prevent this condition.

• A gap of minimum 2 mm (.078" or 5/64th inch) should be maintained between two laminates while adhering side by side.

Dimensional Movement:

InteriorArts HPL laminates are wood (paper) based materials and will shrink in dry conditions and expand in moist conditions. Steps should be taken to prevent stress cracking or adhesive bond failure due to dimensional movement. NEMA offers excellent standards and guidelines for laminate construction that should be followed in all projects.

Stress cracking results from stresses created when the dimensional movement of the laminate and substrate are different in either amount or direction.

In low humidity, often caused by central heating, radiator heat or hot air vents, shrinkage may occur, resulting in cracks at sharp internal corners.

To minimize risk of stress cracking, follow the steps below:

- If sharp internal corners are required, create butt-joints, not cut-outs.

- When bonding on-site with contact adhesive, panel widths should not exceed 24”. If wider panel widths are needed, use rigid or semi-rigid adhesives.

- To minimize dimensional movement, cut the longest dimension of the panel on the length of the laminate sheet (parallel with the sanding lines on backer) because laminate movement is approximately twice as great across width of sheet as it is along the length of sheet.

- Do not use contact adhesives for panels or laminates installed in areas of extreme or regular concentrated heat.

- Pre-condition laminate in temperature and humidity conditions similar to those of the final installation, for minimum 2 days before bonding.

Resistance to Stains:

InteriorArts laminates are resistant to stains belonging to Group 1 and 2 but may stain from reagents in Group 3 and 4. Group 3 and 4 reagents should not be allowed to spill on the surface, and in case of spillage should be immediately wiped off.

Classifications of the reagents:
Group 1: Acetone, trichloromethane, toothpaste, hand cream, urea, alcoholic beverage, natural fruit, fruit drink, meat, vegetable oil, water, NaCl (solution), mustard, soap solution, paint remover (kerosene), phenol and citric acid.

Group 2: Coffee, black tea, milk (condensed and evaporated), cola beverages, vinegar, hydrogen peroxide (3% solution), ammonia (10% solution of commercial concentrate), nail polish remover, lipsticks, water color, laundry marking ink, ball point ink.

Group 3: Sodium hydroxide (25% solution), hydrogen peroxide (30% solution), concentrated vinegar (30% acetic acid), acid based metal cleaners, shoe polish, hair coloring, iodine, boric acid, lacquers.

Group 4: Citric acid (10%solution), acetic acid (5% solution).

Cleaning:

1) To clean the surface, use a damp cloth or sponge and a mild soap or detergent.

2) Stains belonging to Group 2, such as coffee or tea, can be removed using a mild household cleaner/detergent and a soft bristle brush.

3) If a stain persists, apply a paste of baking soda and water with a soft bristled brush. Scrubbing lightly, 10 to 20 strokes, should remove most stains. Although baking soda is a low abrasive, excessive scrubbing or exerting too much force may damage the decorative surface, especially if it has a gloss finish.

4) Stubborn stains belonging to Group 3 and 4, which resist any of the above cleaning methods, may require the use of undiluted household bleach or nail polish remover. Apply the bleach or nail polish remover to the stain and let it stand no longer than two minutes. Rinse thoroughly with warm water and wipe dry. This step may be repeated if the stain appears to be going away and the color of the laminate has not been affected.

WARNING:

Prolonged exposure of the laminate surface to bleach will cause discoloration. Acid based cleaners will permanently damage the laminates. Never allow these cleaners, or bottles, rags or other items contaminated with these cleaners, to come in contact with the laminates. Wipe such areas immediately, and rinse thoroughly with water.

Maintenance:

• Abrasives: Abrasive pads, scouring powders or cleansers may permanently damage the laminate surface making it susceptible to staining.

• Harsh chemicals: Harsh chemicals such as oven cleaner, toilet cleaner, or drain cleaner will etch and discolor the decorative surface. High pressure decorative laminates are not designed to resist continual contact with these chemicals. If any of these products spill over the surface remove immediately, rinse thoroughly, and wipe dry.

• Hot objects: Even though HPL has high heat resistance, exposure to temperatures greater than 275°F is not recommended. Hence, do not place hot frying pans or dishes directly from the oven or cooktop on the laminate surface. As a precaution, protect the surface from heat generating appliances such as pressing irons, toasters, curling irons and electric cookers by using a trivet or insulated pad. Prolonged exposure to temperatures above 150°F may result in separation of the laminate from the substrate.

• Sharp objects: Never use knives or other sharp objects directly on the decorative surface. Use of chopping block or counter saver is recommended.

• Impact: Even though high pressure decorative laminates have excellent impact resistance, chipping or cracking may occur. Do not abuse the high pressure decorative laminate by dropping heavy objects such as cans, dinnerware, or glasses or deliberately hammering directly on the surface.

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Laminate Properties

Property	IS 2046-95 Standard Grade	Typical Value InteriorArts Standard Grade	IS2046/95 Vertical Grade	Typical Value InteriorArts Vertical Grade
Thickness Tolerance	+10%	+10%	+10%	+10%
Appearance	No ABC defect	No ABC defect	No ABC defect	No ABC defect
Surface Wear Resistance (cycle)	>350	>400	150	>150
Thickness Increase (max)	12%	8%	12%	8%
Weight Increase (max)	10%	8%	10%	8%
High Temperature Resistance	Slight effect	Slight effect	Slight effect	Slight effect
Stain Resistance				
Reagents 1 and 2	No effect	No effect	No effect	No effect
Reagents 3 and 4	Slight effect	Slight effect	Slight effect	Slight effect
Small Dia Ball Resistance	20 N	22 N	15 N	17\b5
Dimensional Stability MD (max)	0\b5	0\b34	0\b7	0\b5
CD (max)	0\b8	0\b7	0\b8	0\b7
Resistance to Dry Heat (1800)	Slight change		Not required	Not required
Resistance to Cigarette Burn	Moderate change	Moderate change	Not required	Not required

Marker Board Info (item 1030):

Dry erase marker board laminate is designed for interior vertical use only. Do not adhere directly to plaster, drywall (gypsum board) or concrete. Do not use in areas exposed to temperature exceeding 275°F.

Substrates: Marker board laminates can be bonded with particle board or MDF. The use of plywood is not recommended due to the potential for surface telegraphing, stress cracking, and shrink-back problems. The substrate should be sanded smooth, clean, free of oil or grease, and uniform in thickness.

Adhesives: Contact, semi-rigid (PVC) or rigid (urea, resorcinol) adhesives can be used. Always follow the adhesive manufacturer's recommendations. Avoid using combination of substrate and/or adhesive that causes telegraphing.

Marker Board Cleaning:

- Marker board can be cleaned using a felt or multi-purpose board eraser.

- For additional cleaning, a soft cloth dampened with warm tap water and mild soaps, such as those used for hands or dishes, is recommended.

- If stubborn stains persist, marker board laminate can be cleaned with isopropyl alcohol or spray-type glass cleaners.

- Remember to clean erasers often by wiping to remove dry erase marker residue.

- Do not use cleansers that contain abrasives, acids or alkalis, they will damage the decorative surface.

- The boards should be regularly cleaned with a moist cloth to remove residues of ink and other chemicals.

Marker Board Properties:

Properties		Test Method as per EN-433-3-2005	Test Results as per EN-438-3:2005	Test Result of InteriorArts
Length & Width Tolerance		6.3	+ 10 mm .0 mm	+ 10 mm .0 mm
Thickness Tolerance 0.5 mm to 1.0mm		6.3	+0.10	+0.10
Resistance to Surface wear (Revolution Minimum)		10	>350	>500
Resistance to immersion in Boiling water Appearance (Rating min)	Glass Finish Other Finish	12	3 4	3 4
Resistance to Dry Heat at 1800C Appearance (Rating Min)	Glass Finish Other Finish	16	3 4	3 4
Dimensional Stability at elevated temp (Max.%)	Machine Direction Cross Direction	17	<0.55% <1.05%	<0.42 <0.78
Resistance to Impact by Small-Diameter Ball (Spring Force)		20	>20N	22
Resistance to Scratching N (min)		25	>3	>3.0
Resistance to immersion in Boiling water Appearance (Rating min)	Group 1 & 2 Group 3 & 4	26	5 4	5 4
Resistance to Colour Change in Xenon ate Light (Grey Scale Rating min)		27	4 to 5	5
Resistance to Cigarette Burns Appearance (Rating min)		30	3	3
Resistance to water Vapour Appearance (Rating min)	Glass Finish Other Finishes	14	3 4	3 4