

# 3D Laminates

For protective surfacing of flat and 3D retail fixture components



## KYDEX® 3D Laminates

### Thermoplastic Alloy Formulated for Durability and Performance

KYDEX® 3D Laminates are formulated for extreme resistance to impact and harsh cleansers. It is fire resistant and self-extinguishing. Engineered to be flat laminated or formed over components, it can be routed with deep recesses for cutting edge retail fixture components.

*Protect the long-term performance of retail fixture components with damage-resistant KYDEX® 3D Laminates.*

*MDF board was routed, membrane pressed, and mitre-folded to produce durable, drop-front shelving for Smithsonian Museum Stores.*

#### Impact and Puncture Resistant

KYDEX® 3D Laminates provide significantly better impact and puncture resistance than high-pressure laminates (HPLs) and low-pressure laminates (LPLs or melamine) which tend to chip, crack or break in high traffic areas.

#### Forms to Compound Corners and Contoured Edges

KYDEX® 3D Laminates seamlessly encapsulate the top and side surfaces of routed wood substrates. This allows for production of parts with compound curves, undercut edges, fine details, and sharp or rounded corners—and even brand identifications and wire management holes.

Components made using KYDEX® 3D Laminates appear to be machined from solid wood, solid aluminum, granite, or solid surfacing, and can be produced far more economically than with traditional methods.

#### Minimises the need for Moulding and Edge Banding

With KYDEX® 3D Laminates, seamless cladding of 3D components eliminates edge banding, T-moulding, sharp edges, unsafe corners, and delamination problems associated with HPLs and LPLs.

#### Wide Range of Colours, Textures, and Patterns

KYDEX® 3D Laminates are offered in a wide range of solid colours, metallics, granite patterns, and highly realistic wood grains. This enables fixture components to closely simulate components machined from the finest solid materials, both in shape and in finish.

#### Matching Other Surface Materials

It is now possible to mix and match KYDEX® 3D Laminates with popular HPLs, melamine boards—including those of Flakeboard®, Formica®, Roseburg®, Tafisa®, Wilsonart®, and others.

#### State-of-the-Art Applications

KYDEX® 3D Laminates provide the freedom to design state-of-the-art, three-dimensional store fixture components that simulate more expensive, solid materials:

- Kiosks
- Checkout counters
- Cabinetry
- Exhibits and displays
- Door and drawer fascias
- Mouldings
- Pedestals and stands of all types
- Transaction surfaces
- Workstations
- Kickplates and pushplates
- Logo and trademark panels
- Tabletops
- Shop fittings
- Flat-laminated panels of all types
- *And much, much more*

## Production Methods

### Membrane Pressing

Membrane pressing uses vacuum and pressure to apply heated KYDEX 3D Laminate onto a wood or composite substrate. The substrate can be routed to any three-dimensional shape including compound curves, undercut edges, profiles, sharp details and rounded corners:

- Conforming fully to the core
- Ability to create three-dimensional contours and seamless edges with compound curves
- Preservation of sharp edges and surface detail
- Maintenance of uniform wall thickness on high spots, low spots, and sharp corners
- Ability to form around bottom bevels for total encapsulation

### Laminating and Mitre Folding

Lamination with KYDEX® sheet results in a protective, attractive surface that does not chip, crack, break, or snap like HPLs, to withstand abuse in high-traffic retail, institutional, and commercial interiors.

- Integral colour (depending on grade) to eliminate black seams
- Available in a range of thicknesses
- A wide choice of substrates, such as wood, metal, gypsum, and rigid foam
- Use of commercially available adhesives and hot- or cold-pressing production methods
- Ability to mitre fold to produce seamless edges

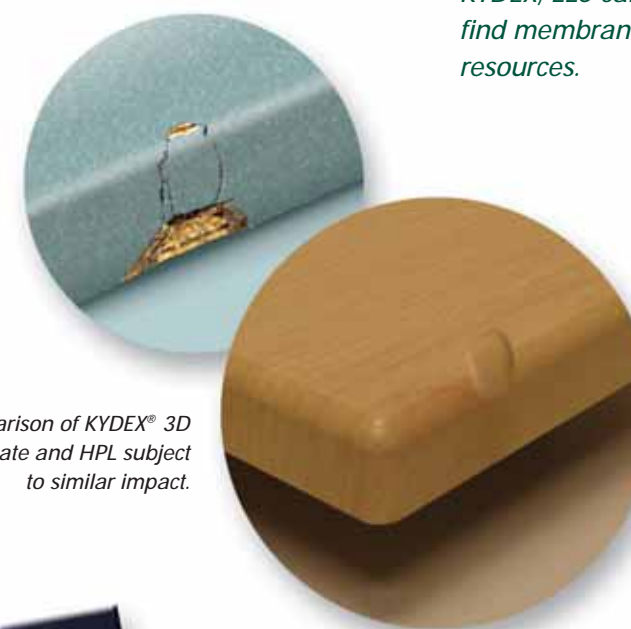
### Forming, Fabricating, and Machining

The diversity of methods to effectively form, fabricate, machine, and join KYDEX® 3D Laminates—without the cracking, chipping, or snapping associated with many thermoplastic and thermoset sheet products—opens limitless application possibilities.

- Machining with conventional power tools (saw, die cut, shear, rout, drill, sand, file, mill)
- Post forming, brake forming, and heat welding
- Joining with screws, rivets, other common fasteners, or commercially available adhesives
- Appropriate for formed and/or laminated products requiring simple or complex secondary operations

*KYDEX® sheet is also offered in heavier gauges that are self-supporting and can be utilised without a substrate for fabrication, forming, and machining of brackets, partitions, housings, and other accessories to match fixture components.*

*KYDEX, LLC can help you find membrane-pressing resources.*

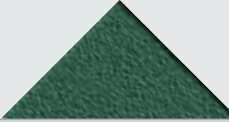
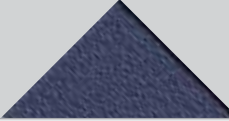

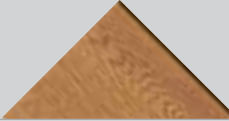

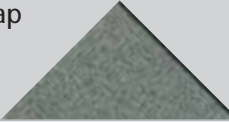



*Comparison of KYDEX® 3D Laminate and HPL subject to similar impact.*

*KYDEX® 3D Laminates can cover compound corners without edge banding.*



## 3D Laminates

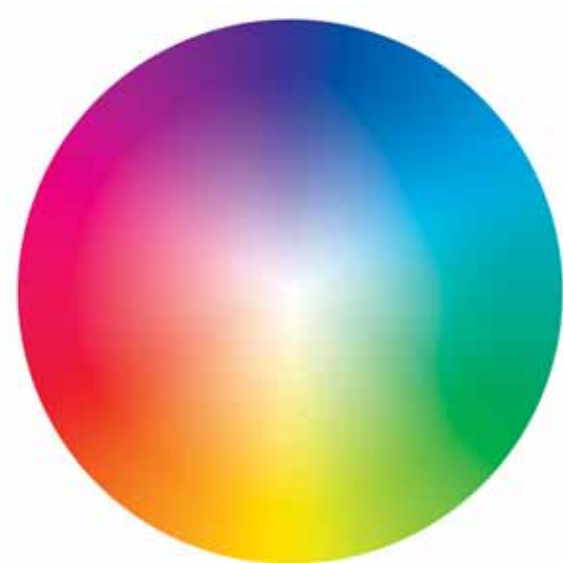
	Description
 <p><b>KYDEX® HD Integral Colours</b></p>	High durability, Class I/A fire rated sheet with integral colour in 0.56 mm (0.022") thickness—the thinnest KYDEX® sheet offered—developed specifically for membrane pressing applications. Improves edge definition, post-press trimming, and press cycle times, while surpassing HPLs, and melamine in resistance to surface and edge impact. Available in roll and sheet stock.
 <p><b>KYDEX® XD Integral Colours</b></p>	Specialised Class 1/A grade of KYDEX® sheet in 0.76 mm (0.030") and 1.02 mm (0.040") thickness offers extreme durability. Intended for flat and 3D laminating of building products exposed to high traffic, and offered in 36 standard colours, 4,000 custom colours, and six textures. Excellent for mitre-folding applications.
 <p><b>KYDEX® WG Wood Grain Cap</b></p>	High impact, fire rated sheet in 0.76 mm (0.030") thickness with colour matched substrate and permanently fused to a high performance cap film with highly realistic wood grain patterns. Developed specifically for membrane pressing applications, thin-gauge KYDEX wood grain sheet improves edge definition, post-press trimming, and press cycle times, and stands up to extreme abuse in retail environments while simulating components milled of the finest solid hardwoods. Offered in 13 stock wood grain patterns that match melamine, and HPLs. Available in roll and sheet stock.  NOTE: Depending on sheet size, pattern may be centered on sheet. May not print to edge.
 <p><b>KYDEX® 152 WG Wood Grain Cap</b></p>	Super tough KYDEX® sheet in 1.02 mm (0.040") thickness offers a higher level of durability. Available in the same patterns as KYDEX® WG plus several custom wood grain patterns; each substrate colour is custom matched to complement the wood grain cap. Class I/A rated when tested according to ASTM E-84.  NOTE: Depending on sheet size, pattern may be centered on sheet. May not print to edge.
 <p><b>KYDEX® 130 Integral Granite</b></p>	High-performance KYDEX® sheet with integral granite pattern to simulate solid surfaces. Available in five colours. Class I/A rated for non-wallcovering applications.
 <p><b>KYDEX® 510 Granite Cap</b></p>	KYDEX® sheet of any colour with a clear, weatherable cap that is reverse-printed with black/white.
 <p><b>KYDEX® 110 Integral Metallic</b></p>	Super tough metallic-coloured KYDEX® sheet that sets new standards for 3D laminating applications in impact resistance, formability, fire retardancy, and aesthetics.

Flammability Class 1/A (ASTM E-84)	Impact Resistance Gardner Drop Dart (25.40 mm [1.0"] MDF)	Thicknesses/Textures										Colours/Patterns						Grade	
		0.56 mm (0.022")	0.71 mm (0.028")	0.76 mm (0.030")	1.02 mm (0.040")	P-E Smooth Nap	P-C Level Haircell	P-K Cashmere	P-3 Velour Matte	P-8 Suede	P-1 Haircell	36 Standard Colours	Stock Colours Available	Granite: n Integral : Capped	Wood Grain Patterns	Metallics	Over 4000 Custom Colours		
n	33.90 N-m 300 in-lbf	n						n				n	n					n	KYDEX® HD Integral Colours
n	48.58 N-m 430 in-lbf			n	n	n	n	n	n	n	n	n						n	KYDEX® XD Integral Colours
n	35.06 N-m 310 in-lbf			n									n		n				KYDEX® WG Wood Grain Cap
n	50.84 N-m 450 in-lbf				n										n				KYDEX® 152 WG Wood Grain Cap
n	42.93 N-m 380 in-lbf		n		n	n	n	n	n	n			n						KYDEX® 130 Integral Granite
	62.14 N-m 550 in-lbf				n	n		n	n	n	n	n	1					n	KYDEX® 510 Granite Cap
n	37.28 N-m 330 in-lbf		n		n	n		n	n	n							n		KYDEX® 110 Integral Metallic



## KYDEX® Sheet Colours

KYDEX® sheet is currently available in over 4,000 colours, granite, metallic and wood grain patterns, multiple surface textures and thicknesses from 0.56mm to 12mm. If none of these choices meet your needs, we'll make a custom colour just for you.

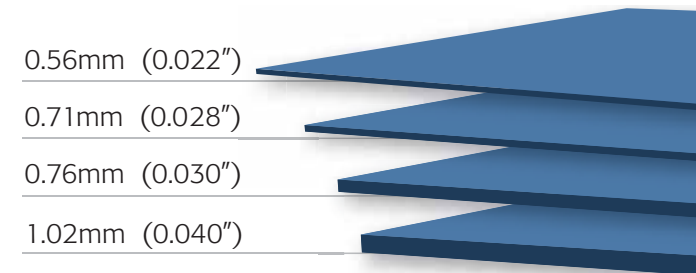


## KYDEX® 3D Laminates Stock Colours

 Rooster Red 12037	 Pewter Gray 52001	 Pinstripe 52070
 Black 52114	 Gyre Falcon Grey 52521	 Polar White 62000
 Snowflake 62029	 Monterey 62033	 Frosty White 62366
 Beige 72005	 Chocolate 72010	 Pepperdust 72784

## Thicknesses

Custom thicknesses also available



0.56mm (0.022")

0.71mm (0.028")

0.76mm (0.030")






1.02mm (0.040")



Chip chain sample kits containing KYDEX® sheet colours, metallics, granites, surface textures and sheet thicknesses are available through the Customer Service Department.  
800.325.3133  
Outside the US: +1.570.389.5814  
Or visit [www.kydex.com](http://www.kydex.com) to order a sample kit or complete a Custom Colour Match form.


## Patterns

### KYDEX® 130 Granites










 Rosestone 82101	 Black 82503	 Glass Green 82303	 Navy Blue 82401	 Desert Sand 82703
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### KYDEX® 510 Granites

Shown with black/white cap; rust/gray or clear cap also available














 Pastel Blue 42031	 Black 42114	 Pewter Gray 52001	 Steel Gray 52068	 Pinstripe 52070
 Sandy Beach 72179	 Beige Nebula 72646			

### KYDEX® 110 Metallic Colours

 Copper 82103	 Strawberry Pop 82108	 Ductile Gold 82202	 Lemon Star 82206	 Shimmering Forest 82305
 Olympic Cast 82406	 Royal Garb 82407	 Silver 82507	 Pearl 82606	 Bronze 82704









### KYDEX® WG and KYDEX® 152 WG

Shown 50% of actual size

 Pearwood	 Rustic Cherry	 Riga Birch	 Candlelight	 Tundra Birch
 Chocolate Pear	 Summerflame	 Red Alder	 Honey Maple	 Fusion X
 Ellmau Beach	 Manitoba Maple	 Shaker Cherry		

## Surface Textures

Shown actual size

 P-A Smooth	 P-C Level Haircell	 P-E Smooth Nap	 P-H Seville	 P-K Cashmere
 P-1 Haircell	 P-3 Velour Matte	 P-8 Suede		

NOTE: Texture can influence the appearance of any colour. P-A and P-H textures are not available in all thick-

Colours and patterns are representative only; selection should not be based on reproductions.



## History

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KYDEX, LLC, is the manufacturer of KYDEX® sheet—a leading brand of durable thermoplastic sheet products with a reputation for excellence. Its sheet products are in demand around the globe.

Introduced by Rohm and Haas Company in 1965 for aircraft interior applications, the KYDEX® product line was purchased by U.S.-based KYDEX, LLC, in 1987. Since that time, the company has grown its brand by developing specialised grades to satisfy the needs of a wide range of customer and compliance requirements, emerging applications, and diverse industries.

Today, proprietary KYDEX® thermoplastic sheet is produced in Bloomsburg, PA, USA, at the company's ISO 9002:2000 and ISO 14001 certified manufacturing facilities. KYDEX's customer-centric approach to manufacturing provides fast setup and cost-effective production of quality sheets and rolls—handling small runs, short lead times, and custom orders with ease and assurance.

Worldwide, a network of factory-trained sales professionals and customer service personnel are committed to supporting specifiers and customers with expert advice on designing and producing components that benefit from the outstanding properties of KYDEX® sheet.

## Environmental Policy

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For KYDEX, LLC, environmental responsibility has been an essential part of its business philosophy for more than 20 years. Every KYDEX® thermoplastic sheet product is produced and sold in keeping with the company's commitment to and regard for safety, health, and environmental protection. KYDEX's ISO 14001 certified manufacturing operations and R&D facilities ensure regulatory compliance while helping to protect resources, minimise waste, and reduce environmental impacts. In addition, KYDEX® thermoplastic sheet is 100% recyclable—making it an environmentally sound alternative to other products.

**KYDEX**

ISO 9001:2000 | ISO 14001:2004 Certified

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This information supersedes all previously published data.