

MIRLUX™

PREMIUM PANEL

the latest technological
advancements in PET
surface panels.

The Most Luxurious Panel on the Market

BOLD • ULTRA-MODERN • MADE IN THE USA

SPECIFICATION GUIDE

Transforming Living Spaces
CONTEMPORARY • UNIQUE • SLEEK



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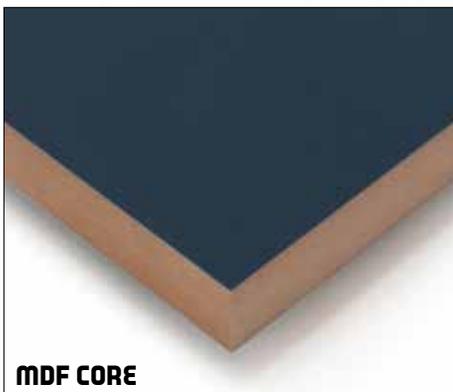
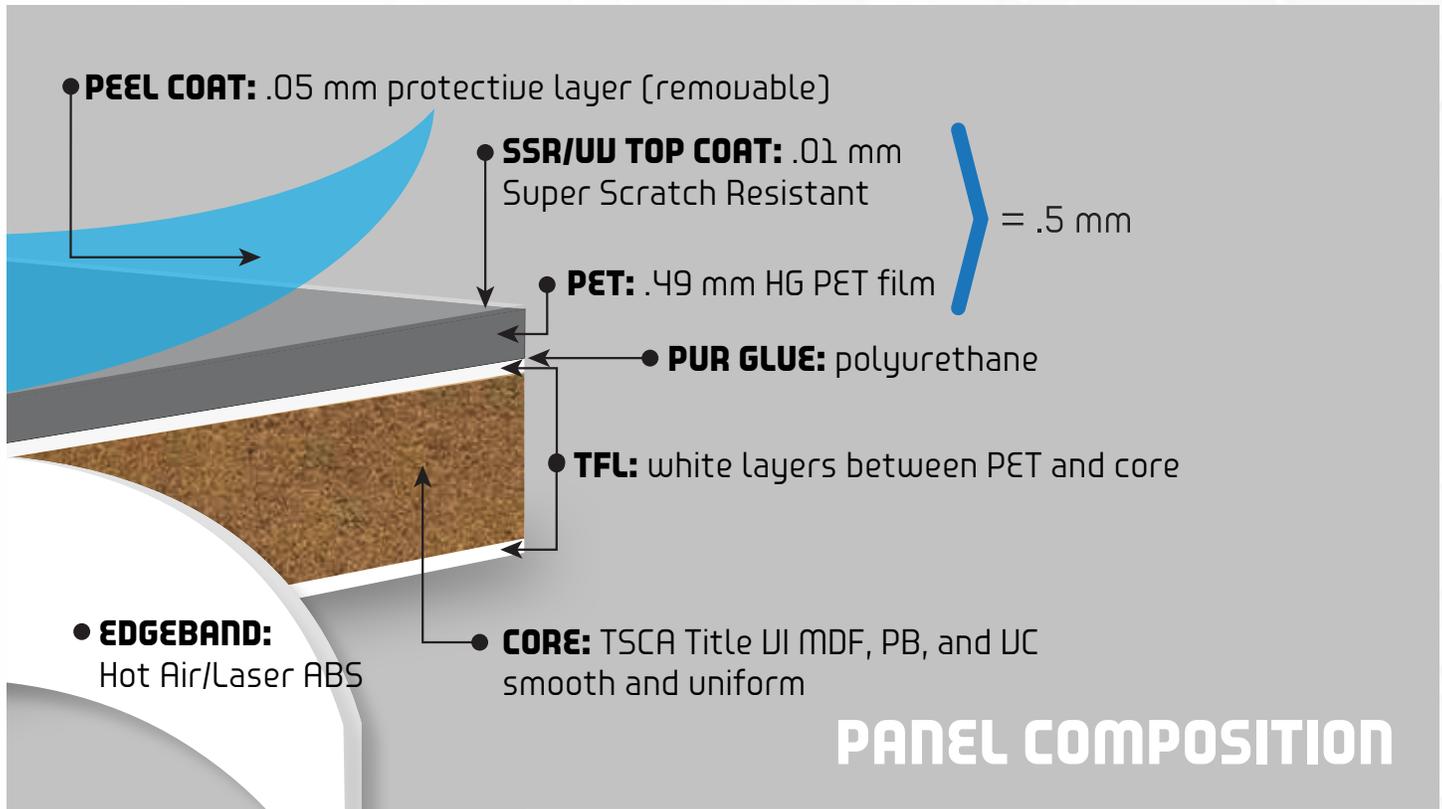


MIRLUX is renowned for its excellent thermal and UV stability, high strength, dimensional stability, optical clarity, and precision surface characteristics. MIRLUX is lighter and less expensive than glass and solid acrylic, with an easy-to-clean, hygienic surface.

MIRLUX IS... **Short answer: PET Laminated Panels**

Available in high gloss or super matte finish in rich colors with depth and clarity.

MIRLUX is a sustainable, low maintenance, durable and scratch resistant solution for kitchen and bath cabinets, interior casework, closets, furniture, retail fixtures and displays, wall panels, and other vertical surface applications.



MEDIUM DENSITY FIBERBOARD cores are available in all finishes

Back options: matching color TFL, PET, or white TFL (thermally-fused laminate)



SANDEPLY PLYWOOD (UC) cores are stocked in all super matte PET finishes

Back: matching super matte PET



PARTICLE BOARD cores are available in all super matte PET finishes and high gloss white

Back: matching color TFL

Good for Our Planet
NON TOXIC • PUC FREE • CHEMICALLY NEUTRAL



Ultra-Modern Look

- **Super Matte finish:** Features rich color and a soft texture. Our .3 mm thick surface results in a smoother look and feel. Core options: MDF, PB, and SandePly (UC).
- **High Gloss finish:** With a depth of color and a mirror-like finish, our .5 mm thick PET surface results in a more reflective and ripple-free surface (standard product thickness is .1-.3 mm) on an MDF core.

Durable

- Super Scratch Resistant (SSR) coating; a hard coat finish for excellent scratch resistance
- Impact and shatter-resistant
- Water-resistant
- Hygienic; does not promote bacterial growth
- Stain and UV resistant
- Won't crack, peel, flake, or delaminate

Sustainable

- TSCA Title VI certified MDF, particleboard (PB), and SandePly (UC) substrate options
- Safe, non-toxic, and chemically neutral, inert material
- PUC and BPA free
- No Volatile Organic Compounds (VOCs)
- Manufactured in the USA

Affordable

- Less expensive than acrylic
- Lower cost of maintenance and ownership

Properties	Specification	Method
Gloss level*	91°	Viewed at 60°
Matte level**	4°	Viewed at 60°
Mass - MR MDF TSCA Title VI	2.8/ft ² (91lb per panel)	Viewed at 60°
Scratch Resistance	0.4 N (Force scale .1-10 N)	DIN EN 15186
Stain Resistance	No change after 30 minutes	NEMA
Bond Strength	100% Fiber Split	
Surface distortion	<235° C 455° F	NEMA
Backing	Color matched standard white TFL backing. Matching MIRLUX high gloss or matte finish available as an option.	

* MIRLUX High Gloss surface rates 91° on the Surface Reflectivity Scale. Back-painted glass rates 100°.

** MIRLUX Super Matte surface rates a 4° on the Surface Reflectivity Scale. A rating of 4-6° is considered the lowest gloss level achievable.

Test results may vary by color and design. This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not be understood as guaranteeing specific properties of the products as described or their suitability for a particular application.

SURFACE FINISHES

SUPER MATTE



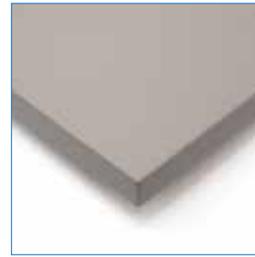
White



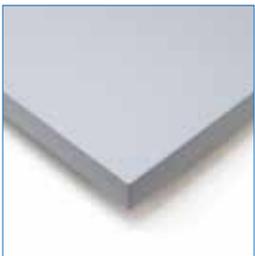
Warm White



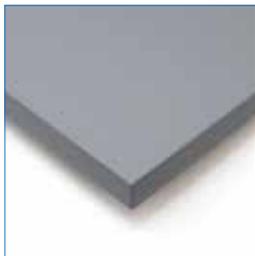
Willow



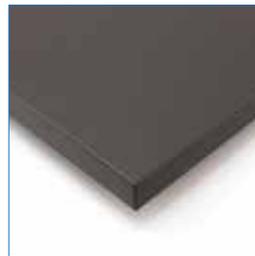
Tan



Light Grey



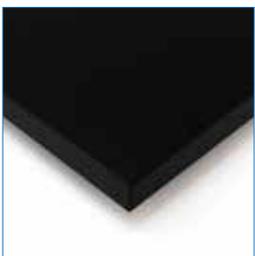
Dove Grey



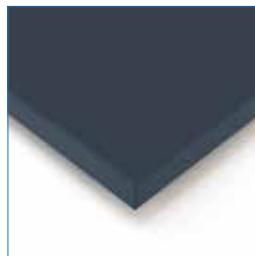
Dark Grey



Graphite



Black



Deep Blue

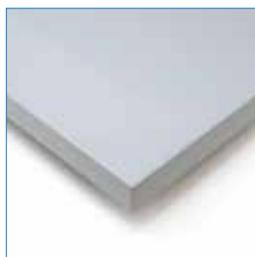


Jade Green

HIGH GLOSS



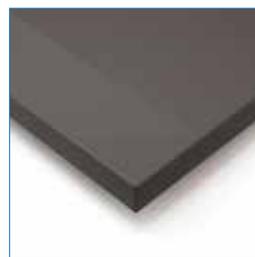
White



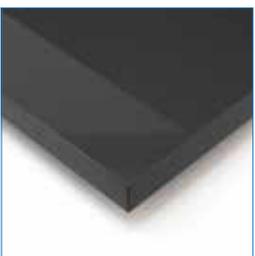
Light Grey



Tan



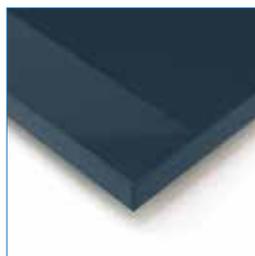
Dark Grey



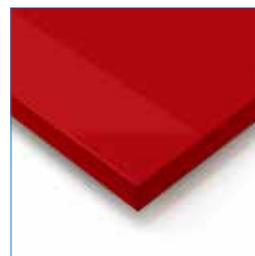
Graphite



Black



Deep Blue



Ruby Red

EDGING

HOT AIR/LASER EDGE:

Hot Air edgbanding is applied without adhesive. Made of 1.2 mm polypropylene, the base layer melts and bonds with the substrate and fills in voids and pits on the edges to result in an encased substrate (water-resistant) matched to the surface. High gloss edgbanding has a reflectivity of 91° and super matte a 4°.



ABS EDGE:

ABS is synthesized from three chemical monomers of acrylonitrile, butadiene, and styrene. Acrylonitrile has high strength, thermal stability, and chemical stability. Butadiene has toughness and impact resistance. Styrene has easy processing, high gloss and high strength.

- user-friendly, easy to trim
- impact, fire and abrasion resistant
- resists warping
- back coating with a universal bonding agent for perfect adhesion
- suitable for hot melt glues or solvent-based adhesives

PERFORMANCE

NEMA STAIN TEST RESULTS

REAGANT		HIGH GLOSS			SUPER MATTE			
		CLEANING STEPS	SCORE	EFFECT	CLEANING STEPS	SCORE	EFFECT	
1	Distilled Water	- - - - -	0	∅	- - - - -	0	∅	
2	Ethyl alcohol: water (50:50)	- - - - -	0	∅	- - - - -	0	∅	
3	Acetone	- - - - -	0	S	- - - - -	0	S	
4	Household ammonia	- - - - -	0	∅	- - - - -	0	∅	
5	10% citric acid solution	- 1 - - -	1	∅	- - - - -	0	∅	
6	Vegetable cooking oil	- - - - -	0	∅	- - - - -	0	∅	
7	Coffee	- - - - -	0	∅	- - - - -	0	∅	
8	Tea	- - - - -	0	∅	- - - - -	0	∅	
9	Tomato catsup	- - - - -	0	∅	- - - - -	0	∅	
10	Yellow mustard	- - - - -	0	∅	1 1 1 1 1	5	∅	
11	Povidone iodine (10%)	- - - - -	0	∅	- 1 - - -	1	∅	
12	Permanent marker	- 1 1 - 1	3	∅	- 1 1 - 1	3	∅	
13	#2 pencil	- 1 1 - 1	3	∅	- 1 1 - 1	3	∅	
14	Wax crayon	- 1 1 - 1	3	∅	- 1 1 - -	2	∅	
15	Black shoe polish	- 1 1 - 1	3	∅	- 1 1 - -	2	∅	
OVERALL CLEANABILITY TOTAL SCORE				13		TOTAL SCORE		16

Total Score represents number of cleaning steps implemented to remove stains made by common household substances (shown above)

CLEANING STEPS

- 0 = Removed with water
- 1 = 25 cycles spray cleaner or sponge
- 2 = 25 cycles baking soda plus spray cleaner on brush
- 3 = Acetone and cotton ball
- 4 = Bleach plus cotton ball
- 5 = Not removed

STAIN RESISTANCE/EFFECT

- ∅ = No Effect
- M = Moderate Effect
Difficult to perceive stain
- S = Severe Effect
Easily perceive stain or damage to surface

SCRATCH, WEAR, AND IMPACT RESISTANCE

TEST	HIGH GLOSS	SUPER MATTE
DIN EN 15186	0.4 ∅ / Class 4F	1.6 ∅ / Class 4F
3.7 Linear Glass Scratch	<20g	<20g
3.7 Diamond Scratch	Rating 2	Rating 1
3.8 Ball impact resistance....	<250 mm	300 mm
3.9 Dart Impact resistance....	>125 mm	>125 mm
3.13 Wear resistance....	8,000 (average cycles)	8,000 (average cycles)

Please see NEMA LD3 2005 for a complete description of methods and list testing procedures.

Test results may vary by color and finish.

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not be understood as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed.

NEMA PRODUCT TEST COMPARISON

TEST		RESULTS		
Properties	Description	PET	HPL	RTF/TFL
NEMA Scratch resistance Diamond Scratch Method (Rating 1-5)	Reports the scratch resistance as the lowest mass at which a grade of "1" occurs or greater than 200 g if no grade of "1" is recorded.	High Gloss 0.4 N 2 Super Matte 1.6 N 2	1 N 2	2 N 3
NEMA Scratch Resistance Linear Glass Scratch Method	Measures the ability of the surface to resist scratching by a material of similar sharpness and hardness to silica or diamond.	<20g	-	-
NEMA Light resistance (UV)	Measures the ability to retain its color when exposed to a light source approximating sunlight through window glass.	No Effect	Slight Effect	Slight Effect
NEMA Wear resistance	Measures the ability of the surface to resist abrasive wear-through of the decorative layer.	8,000 cycles	400 cycles	400 cycles
NEMA Stain resistance	Measures the stain resistance of the laminate by common household substances, coffee, tea, mustard, catsup, ammonia, etc.	Stain 1,2, 4-15 No Effect 3 Severe (acetone only)	Stain 1-10 = No effect 11-15 = Moderate	Stain 1-10 = Moderate 11-15 = Slight to moderate (iodine only)
NEMA Cleanability	Value represents number of cleaning steps implemented to remove stains made by common household substances.	0-13	10-20	5-13
NEMA Ball Impact resistance 224g steel ball 38.1mm diameter	Measures the ability of the laminate to resist fractures due to impact by a large diameter ball.	>118" results in dents	> 50" results in fracture	> 15" results in fracture
NEMA High Temperature Resistance	This test measures the ability of the surface to maintain its color and surface finish when subjected to a high temperature. 185° C (365° F) for 20 minutes.	No Effect >245° C 473° F results in distortion of surface	Slight Effect >180° C 356° F results in discoloration	Moderate Effect >140° C 285° F results in discoloration

NEMA Test Results Version LD3-2005



MIRLUX is perfect for medical and dental applications, laboratories, and clean rooms.

PANEL STOCK SIZES

MDF CORE			
COLOR	FINISH	THICKNESS	SIZE
all	HG & SM	5/8"	49" x 97"
Backs: white TFL			
white	HG & SM	18.5mm	49 x 97
warm white			49 x 121
willow	HG & SM	1/4"	49 x 97
tan			
light grey			
dove grey			
dark grey			
graphite			
black			
deep blue			
jade green	SM	18.5mm	49 x 97
			49 x 121
		1/4"	49 x 97
Backs: coordinating colored TFL			
2-SIDED all	HG & SM	18.5mm	49 x 97
ruby red			

SANDEPLY CORE			
COLOR	FINISH	THICKNESS	SIZE
all	SM	18.5mm	48.5" x 96.5"
Backs: coordinating PET (2-sided)			

PB CORE			
COLOR	FINISH	THICKNESS	SIZE
white	SM	5/8"	49 x 97
white	HG	3/4"	49 x 121
white	SM	3/4"	49 x 97 49 x 121
warm white			
willow			
tan			
light grey			
dove grey			
dark grey			
graphite			
black			
deep blue			
jade green			
Backs: coordinating colored TFL			

FILM (NO CORE)			
COLOR	FINISH	THICKNESS	SHEET SIZE
all	HG & SM	.3 or .5 mm	50 x 97
			50 x 121

HG = High Gloss

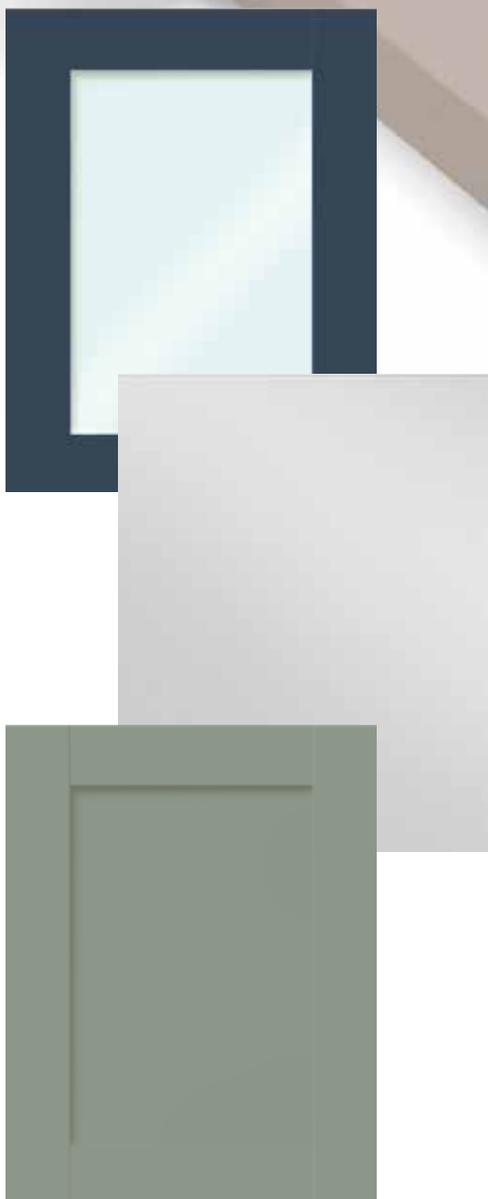
SM = Super Matte

Custom thicknesses available by request

PROTECTIVE FILM

The finished panel stock comes with a protective peel coat. Once removed this leaves no residue.

PREMADE DOORS



Order through:
ALLMOXY

SLAB: High gloss and super matte sleek and stylish modern surface

SHAKER: Classic look in super matte PET simulates a painted finish that resists chipping better than painted surfaces.* 2.5" and 3" thick style and rail options.

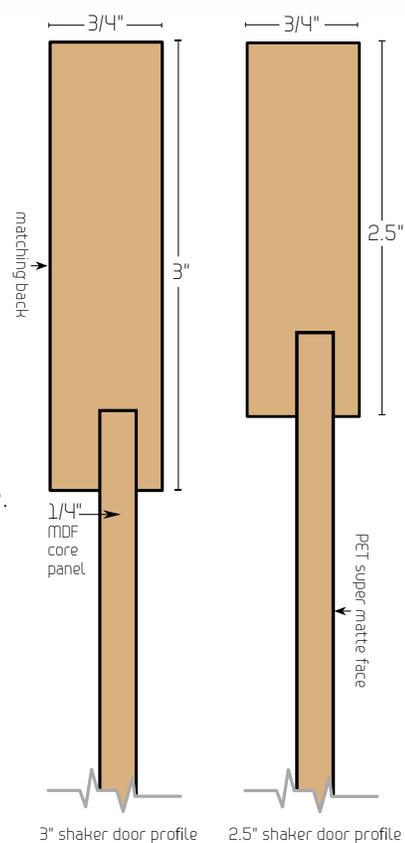
GLASS: Our classic shaker with 1/4" thick glass center panel insert

CORES: TSCA Title VI compliant medium-density fiberboard (MDF) core, plywood (UC) and Particle board (PB) cores available in super matte only.

Recommendations and limitations

- maximum door size: 47" x 95"
- narrowest edgebandable piece 3"
- doors up to 48" high receive 2 hinges
- doors over 48" high receive 3 hinges

* Doors under 12" wide will be a flat panel door



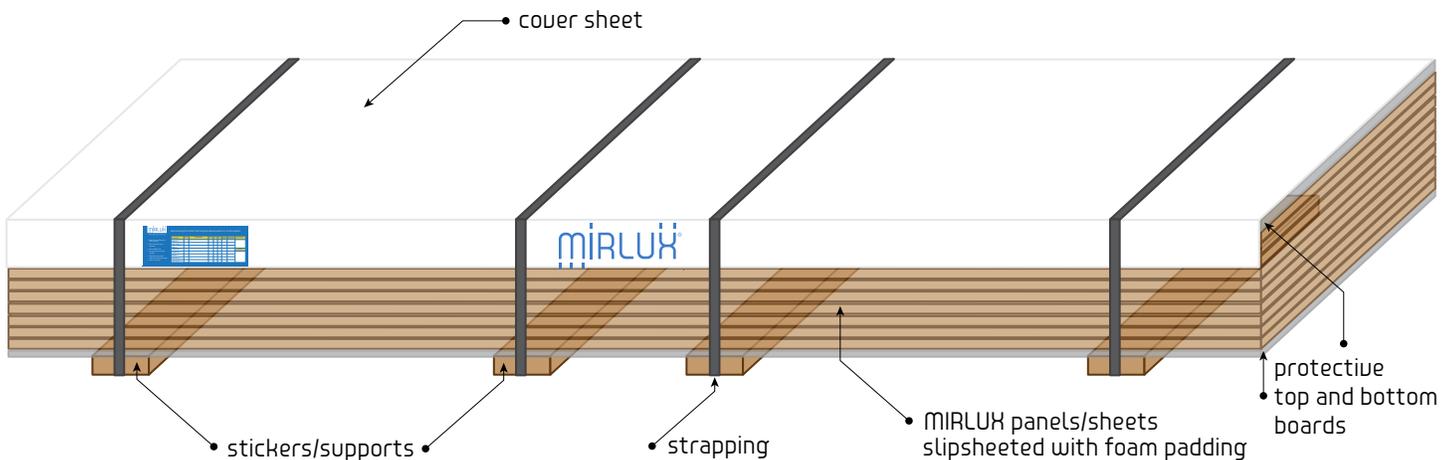


STORAGE

MIRLUX Premium Panels require interior storage in a dry, low-humidity, well-ventilated environment.

Store open units with protective top and bottom boards, foam sheets, and panel peel coats intact.

Prevent potential warpage by storing horizontally on a level surface, with four equally spaced sticker/support blocks, as shown in the illustration below. For boards at 121 inches, use 5 stickers. If stored in cantilevered trees, arms should be evenly spaced so that panels are adequately supported.



HANDLING

Protective Film

The surface of MIRLUX premium panels are covered with a protective film which should remain on the panel during processing and installation. After the film is removed, the surface is ready for use with no additional polishing or curing necessary.

- Protective film should remain intact until the project is complete.
- Store product with protective film intact in out of direct sunlight as the film could be affected by UV light and make it more difficult to remove.
- Panels should be lifted not slid to preserve the protective film.

- Cover sheets should be sent out with each order to preserve face integrity

Foam Padding

Units of panels are packaged with foam padding between each panel. These should remain in place during storage and can be removed during processing.

Avoiding Warpage and Distortion

- Panels may react to severe changes in humidity and temperature. A curvature of up to 2mm/1000mm may occur in extreme environmental conditions.

MACHINING

Processing

MIRLUX panels can be sawn, drilled, and routed.

Always keep the protective peel coat intact.

- Use sharp carbide tools and moderate feed rates.
- Ensure masking film is cut cleanly.
- Adjust the process so there are no masking strands at the edge to complicate the edgebanding process.

Saw Cutting

- Use sharp carbide tipped or diamond blades for best results along with a bottom scoring blade.
- To avoid damage from debris between sheets, cut single sheets on panel saws.
- When book cutting, flip the top sheet
- When cutting single sheets, use a scrap sheet on top of PET
- Blade projection height: 1" above material
- Slow down the saw carriage to avoid chipping
- Increase blade projection to avoid chipping.

Drilling

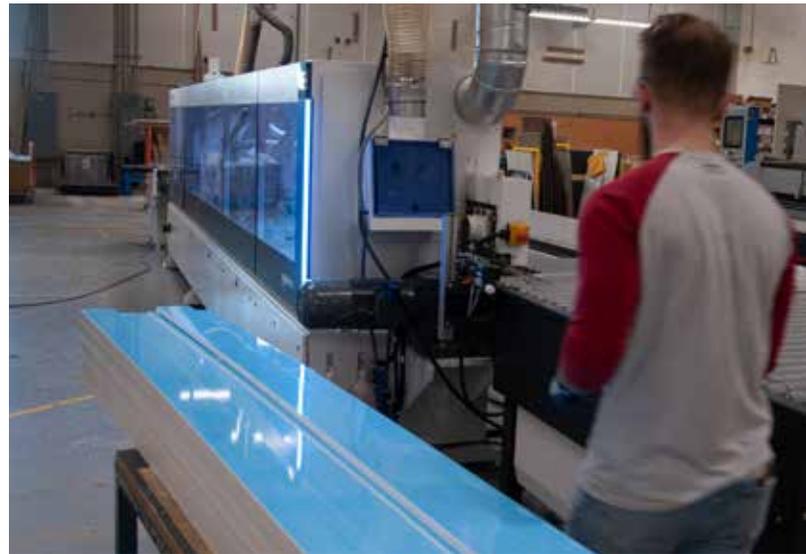
- Use high-speed steel or carbide tipped drills with a tip angle of 110-130 degrees.
- Use slow to medium speeds to avoid overheating the material.
- Test hinge drilling on a test piece to ensure proper depth and back set.

Routing

- Use a feed rate of 10-15 meters/minute with a spindle speed of 15-20,000 RPM.
- For the best finish, use Diamond or solid carbide compression cutters.

Edgebanding

- Edgebanding equipment varies by manufacturer and process.



- Ensure pre mill heads are sharp and in good condition.
- Make sure tape thickness is entered correctly. Entering a smaller dimension will cause more pressure on the edges of the board.
- Adherence:
 - **Piece actuated** (where the heat is intensified as the part passes the unit) typically has a lower idle temperature and runs around 650° F.
 - **Constant** (heat is constantly applied) should run around 450° F
 - Air nozzle pressure to the heating unit is typically run at 1.5-2.5 PSI. The higher the PSI, the higher the temperature will rise.
- Each finish and color may run at different settings to achieve optimal performance. Consult a MIRLUX distributor or Cascade Distribution sales representative for further recommendations.

Protective Film

- Spray with an antistatic solution. Most edge banders are equipped with this as an automatic station.
- Peel the protective film off the outer layer before the roll is attached to the edgebander.
- Machinery cleaned of excess glue that might attract the protective film.

INSTALLATION

Protective Film

The protective film should remain on processed panels and doors during installation. After the film is removed, the surface is ready for use with no additional polishing necessary.

- Do not store product with protective film intact in direct sunlight as the film could be affected by UV light and make it more difficult to remove.
- Avoid sliding the face of the doors to preserve the protection film.
- Protective film should not be removed until the project is complete.

Avoiding Warpage and Distortion

- Panels may react to severe changes in humidity and temperature. A curvature of up to 2mm/1000mm may occur in some extreme environmental conditions.
- Excessive curvature can be minimized by avoiding long narrow panels and by ensuring adequate hinging and fixing support is provided.
- Adequate fixing should be provided at no greater than 500mm centers.
- We recommend an air gap of 6mm adjacent to ovens and other heat sources.
- When attaching decorative hardware be careful to not over tighten as this can distort the surface.



CARE & CLEANING

CLEANING AGENTS AND DETERGENTS SHOULD **NOT** CONTAIN:

Aromatic hydrocarbons, ester, ketones, halogenated hydrocarbons or alcohol above 25%, or vinegar-based cleaners.

- **NO SOLVENTS**
paint thinners, turpentine, isopropyl alcohol, acetone, etc.
- **NO ABRASIVE DETERGENTS**
baking soda, calcium carbonate, powdered feldspar, etc.
- **NO FURNITURE POLISH DESIGNED FOR WOOD**
- **NO DENATURED ALCOHOLS**
ethyl alcohol, white spirits, etc.
- **NO CLEANER IN COMBINATION WITH A BRUSH OR SCRUBBING**
- **USE OF BRUSHES AND SCOURING PADS IS STRONGLY DISCOURAGED**



General cleaning for both high gloss & super matte finishes

A clean cotton or microfiber cloth saturated with a mixture of warm water (99%) and a mild, nonabrasive dish washing soap (1%) can be used to clean MIRLUX by wiping in vertical movements with light pressure.

Never use a dry paper towel for cleaning and do not clean in direct sunlight.

High gloss MIRLUX can be brought to a streak free shine by using Novus 1 plastic protectant or DuPlex Plastic Polish.

Retail cleansers & polishes

Test all retail cleaning agents for compatibility with MIRLUX by applying to an inconspicuous area of the cabinet first, to confirm that the cleaner does not damage the surface.

Always read and follow the directions specified on the label and apply with a clean cotton or microfiber cloth, wiping in a vertical motions with light pressure. Mixing agents are not suggested.

WARRANTY

Cascade Distribution Group (CDG), manufacturer of MIRLUX Premium Panel warrants the product to be free from manufacturing defects in material and workmanship for a two (2) year period subject to the purchase terms and conditions.

Should any failure appear within two years after the initial date of receipt, CDG shall correct such defects by replacement without charge at Cascade Distribution Group's plant or at the location of the products (at CDG's election) provided, however, if Cascade Distribution Group determines that the repair or replacement is not commercially practical, CDG shall issue credit in favor of PURCHASER in an amount not to exceed the purchase price of the products.

Door Warranty: Cascade Distribution Group will only warranty warpage on MIRLUX doors up to 24" x 60" with over a 2.5mm/1000mm curvature.

EXCLUSIONS: This warranty shall not apply to damage arising from any of the following:

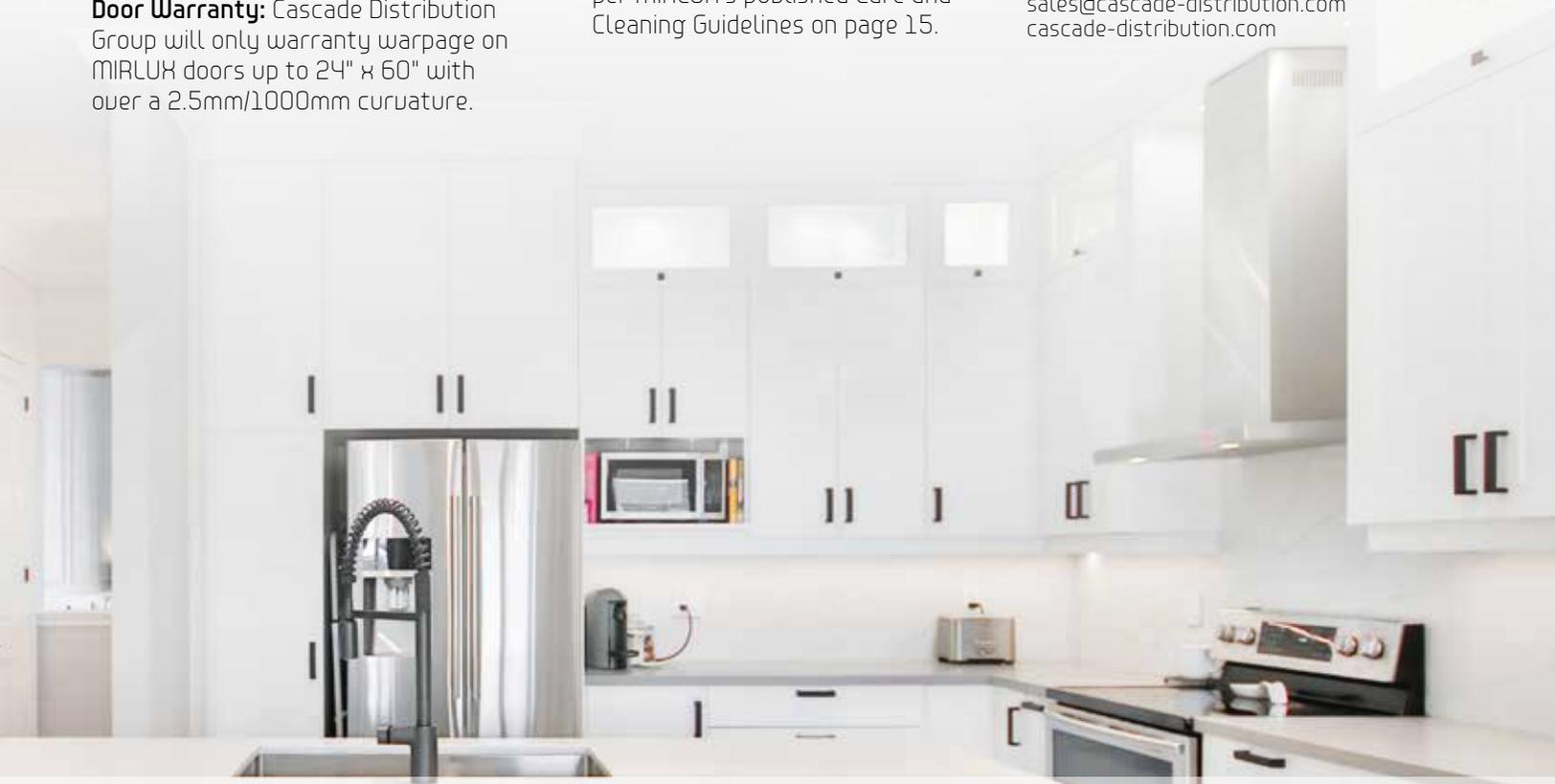
1. Accidents, abuse, misuse, negligence, or acts of nature
2. Improper storage; exposure to extreme temperature changes or humidity levels, see page 12
3. Peel coat removed before manufacturing or installation
4. Product used as a horizontal surface (countertop)
5. Improper manufacturing and/or installation as noted on pages 13 and 14 of this guide
6. Exposure to harsh or corrosive chemicals and cleaners. Failure to use or maintain the product per MIRLUX's published Care and Cleaning Guidelines on page 15.

MIRLUX Premium Panel products are designed and manufactured as decorative finishes for indoor vertical applications only. This warranty is in effect as long as MIRLUX panels have been properly stored, installed, and finished in accordance with published instructions from Cascade Distribution Group.

Contact us for additional technical information and the terms and conditions of this warranty.



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