EGR Decor
PETLite Decorative Panel Products
Technical Data Sheet

February 2024

Summary

EGR PETLite decorative panels are manufactured in Southern California, USA. Visit www.petliteusa.com.

PETLite panels are the economical choice for designers, cabinet makers, fabricators and property owners who require an affordable, high quality panel product for use in a range of commercial and residential vertical applications including but not limited to cabinetry faces, store fixtures, wall panels, closets and furniture.

PETLite panels are made using eco-friendly recyclable P.E.T. (polyethylene terephthalate) high gloss or supermatte polymer skins laminated to an MDF substrate using an extremely thin layer of waterproof and highly heat resistant PUR adhesive. The result is a durable panel with a more aesthetically pleasing and superior quality surface finish compared to painted surfaces, HPLs (high pressure laminates), RTF (rigid thermofoils) and TFL (thermally fused laminates or melamine).

PETLite panels are designed to withstand scratches and scuffs and are also easy to clean and maintain, making them a good option for affordable cabinets and fixtures in high-traffic and high use areas.

All PETLite panels are manufactured as 2S standard with both sides protected with removable protective peel coats. Matching 0.8mm thick P.E.T. laminates (SHAB) and 1mm thick ABS preprimed edge band for automatic edgebanders are also available.

Applications

PETLite panels are ideal for use in a range of vertical applications including but not limited to:

- ✓ Residential and commercial cabinetry faces including kitchens, laundry and vanity cabinets and closets
- ✓ Residential and commercial furniture faces and shelving
- ✓ Commercial wall panels and store fixtures faces

Properties

Property	Test Method	Result
Panel Density	Calibrated scale	820 ± 50 kg/m^3
Gloss PET Laminate (on panel) Thickness	ISO 13894-1	0.5mm ± 0.05mm
Supermatte PET Laminate (on panel) Thickness	ISO 13894-1	0.3mm ± 0.03mm
Gloss PET Panel Thickness	ISO 13894-1	18.5 ± 0.2mm
Supermatte PET Panel Thickness	ISO 13894-1	18.1 ± 0.2mm
Panel Size	Calibrated Scale	48.5" x 96.5" & 48.5" x 120.5" Other sizes such as ¼" thick may be available subject to MOQ and lead time
Flatness	ISO 13894-1	≤ 2 mm/m
Screw-holding (Face/edge)	ISO 13894-1	>1000N
Resistance to Elevated Temperature (short-term) *at 176°F (80 °C)*	ISO 13894-1	No visible change *such as distortion, blistering, cracking, glue-line failure or marked change in appearance*
Resistance to Elevated Temperature (long-term) *at 158 °F (70°C)*	ISO 13894-1	No visible change *such as distortion, blistering, cracking, glue-line failure or marked change in appearance*
Edge-swell *at 68°F (20°C) for 24 hrs*	ISO 13894-1	≤9%
Glue-line Quality	ISO 13894-1	Rating 5 *Extremely difficult to completely remove laminate from core*
Resistance to Boiling Water	ISO 4586-2	Rating 5 *No visible change*
MoR/MoE		35.3/4810 MPa
Weight	Calibrated Scale	2.8 lbs psf for gloss & 2.7 lbs psf for supermatte
Environmental	Various Standards	MDF meets TSCA Title VI, E0, ULEF standards P.E.T. laminates are 100% recyclable
Bond Strength	AS/NZS 4266.2:2017	100% Fibre Split

Properties Continued

Property	Test Method	Result
Hardness	EN 438-2	≥ 0.4 N
Resistance to Impact	ASTM D4226	≥22.5 J/m
Color Consistency	AS/NZS 1580.600	dE<1.5
Pencil Hardness	ASTM D4226	≥6H
Gloss Level	AS/NZS 1580.602	>90° (Gloss) <5° (Supermatte)
Panel Backer	-	2S; identical PET film in either Gloss or Supermatte
Texture	-	2S Gloss & Supermatte; smooth
PET Sheet (SHAB) Size Gloss & Supermatte (for manual lamination)	Calibrated Scale	0.8mm ± 0.08mm thick 1238 x 2465mm ± 1.5mm (wide & long)

Storing & Transporting PETLite

- ✓ Always wear applicable PPE when handling and transporting PETLite panels, laminate and edge band
- ✓ Store all PETLite products indoors only, in environments free of moisture, sunlight and dust. Ideal storage temperature is 50°F and 85°F and humidity of less than 60%
- ✓ Always maintain a cover board on top and bottom of complete and partial panel units for protection
- ✓ Protect panel edges
- ✓ Panels should be stored flat on a pallet or on a flat cover board at least ¼" thick supported by four equal height and evenly spaced full width stickers or runners, maximum of 8" in from both (long) ends. A minimum of five stickers should be used to store 10' long PETLite panels
- ✓ Never walk on PETLite panels and SHAB or on cover boards atop of PETLite products
- ✓ Peel coats must be kept intact during storage and transportation of panels and finished components
- ✓ When packing panels for transportation, ensure no dust or foreign matter is trapped between panels
- ✓ Never drag panels and always have at least two people lift panels one at a time. Alternatively, use mechanical method such as vacuum lift with adequate care.
- ✓ Always store and transport panels horizontally
- ✓ If panels are to be transported on flatbed, ensure product is adequately tarped / covered to protect against the elements
- ✓ SHAB can be rolled up and transported in cartons no less than 50" x 15" x 15" (H x W x D) but should be removed and stored flat and horizontally protected by cover boards

Fabricating, Edging & Installing PETLite Panels & Components

Prior to Fabrication

- ✓ Always wear suitable PPE when working with PETLite products
- ✓ Inspect panels for visible defects or damage prior to fabrication. Contact your vendor if any issues are identified.
- ✓ Always keep the peel coat intact on the panel surfaces until fabrication and installation are complete. If the peel coat must be removed prior to transportation to the installation site, pack carefully to prevent damage during transportation.
- ✓ PETLite panels can be cut, sawn, shaped, drilled and bored with a range of equipment including CNC router, table, panel, band and circular saw, hand or table router, etc. Ensure all equipment is operated and maintained as per manufacturer's instructions

Saw Cutting

- ✓ Peel coats must be kept intact until after installation except in specific circumstances
- ✓ Always use scoring blades when cutting PETLite panels on table and panel saws
- ✓ When cutting panels with circular, panel or table saw, use sharp carbide teeth blades with minimum of 8 teeth per inch
- ✓ 12" diameter saw blades at 3200rpm provide best results
- ✓ Clamp panels or hold firmly in place to minimize vibration to avoid chipping
- ✓ Maintain steady cutting rate
- ✓ Machine with face side down

Boring

- ✓ When boring for hinge holes with dedicated hole borer, always drop the tool at slow speed
- ✓ Best results will be achieved by drilling or boring through a thin MDF sacrificial block
- ✓ Take care regarding depth of hole ensuring it is correct. Shallow holes can cause dimples or defects on the panel face
- ✓ When installing hinges, remove peel coat in the hinge area to prevent it from being caught under hinge plates

Routing

- ✓ When routing, twin or triple flute compression carbide router bits produce a cleaner finish than single flute bits
- ✓ Feed rate of 11 to 16 yards per minute with spindle speed of 20,000rpm provide best results
- ✓ Machine with face side down

Drilling

- ✓ Use sharp high-speed carbide tipped drill bits with drill speed set to slow to medium only
- ✓ Ideal drill bit tip angle range is from 110 to 130^{o}
- ✓ Use sacrificial material on the backside to prevent chip out

Screwing

- ✓ Use pilot holes to prevent splitting
- ✓ Avoid over-tightening or hammering in screws

Avoiding Fiber Split of the MDF Core

- ✓ On rare occasions when fabricating PETLite panels, the PET laminate may lift in a corner which can occur when a PETLite panel or component is subject to impact with another solid surface in handling or fabrication, or if using blades or bits that are not well maintained.
- ✓ If this occurs, either trim the corner or pre-mill via automatic edgebander. Do not pull at the PET laminate as this can cause the MDF fibre to split as the PUR adhesive used to laminate is vastly stronger than the MDF fibers.

Edge Banding

PETLite preprimed ABS edge band suitable for use with glue applying edgebanders is available in 1mm 15/16”x328’ rolls.

- ✓ Best practice and results are achieved using PETLite preprimed edge band with automatic edge bander adhering the edge band with PUR (polyurethane reactant) adhesive. Use white PUR glue with white panels and clear or natural with all other colors. Black PUR adhesive works best with PETLite black panels.
- ✓ Alternatively, EVA (ethylene vinyl acetate) adhesive can be used with automatic edgebander to apply PETLite preprimed edge band however this is not considered best practice and may leave unsightly glue lines and excessive telegraphing when applying gloss edge band. Use white EVA glue with white panels and clear or natural with other colors. Black EVA glue is the preferred color with PETLite black panels
- ✓ Always ensure automatic edgebanders are clean and maintained especially in relation to dust extraction and regular sharpening of pre-miller, trimmers, corner rounders, profilers and scrapers
- ✓ To remove edge band glue overrun where required, wipe with a clean microfiber cloth dipped in low odor kerosene or 100% mineral spirits using only light pressure.
- × **Never use harsh solvents such as acetone, paint and lacquer thinners to remove excess edge band glue.**

Installation

- ✓ Keep peel coats in place until installation is complete except where otherwise noted
- ✓ Peel coats should be removed where another building / cabinetry component will interfere with its removal after installation. For example, remove peel coat of a vertical PETLite component in the vicinity where a countertop adjoins the panel to prevent the peel coat from being trapped by the countertop.
- ✓ To avoid dimpling, hand tighten screws when installing hardware such as door handles on PETLite faces
- ✓ Remove peel coats when all other trades have completed their work.
- ✓ Once peel coats are removed, wipe down PETLite high gloss panels with ***VuPlex*** or ***Novus 1***. Wipe down PETLite supermatte panels with ***Matte Maxx*** and clean, soft microfiber cloth. For more on these products, visit www.petliteusa.com.

Hinge Recommendations

- ✓ Number of hinges must meet both component height and weight in the table below
- ✓ Avoid making and hanging doors wider than 2'
- ✓ Avoid making and hanging long and slender doors where possible
- ✓ Consider using additional hinges for long / high / heavy doors

Door Height	Component Weight	Number of Hinges
Up to 31" (approx. 800mm)	≤ 15 lbs	2 hinges
31" to 51" (approx. 800mm to 1300mm)	≤ 24 lbs	3 hinges
51" to 70" (approx. 1300mm to 1800mm)	≤ 35 lbs	4 hinges
70" to 82" (1800mm to 2100mm)	≤ 38 lbs	5 hinges
82" to 97" (approx. 1800mm to 2450mm)	≤ 44 lbs	6 hinges

Manually Laminating PETLite Laminate (SHAB)

Matching loose PETLite laminate (SHAB) in 0.8mm 4x8' is available to complement PETLite panels. Note that the loose SHAB is considerably thicker than the laminate used for PETLite panels to allow for easier manual lamination. PETLite SHAB can be laminated to composite panel substrates using various adhesives including:

- ✓ Contact cements
- ✓ Liquid PURs
- ✓ EVAs
- ✓ Two-sided tapes
- × **Never use PVA & wood glues**

Preparation

- ✓ Whichever adhesive is being used, ensure the manufacturer's instructions are followed
- ✓ Ensure all necessary and applicable health and safety precautions and procedures are always followed

Pre-Lamination Test

- ✓ It is important if you are new to laminating PETLite SHAB, or if you have experience but are changing adhesives, to conduct a test to ensure the glue does not affect the SHAB **and** that it provides sufficient adhesion
- ✓ This test must be conducted for a minimum of 24 hours prior to commencing the job proper
- ✓ When satisfied with the adhesion level and the PETLite SHAB is not adversely affected by the adhesive, then proceed to project lamination

Lamination

Follow the checklist below:

- ✓ Ensure substrates are clean, dry, flat and free of dust particles, residue, etc
- ✓ Turn off fans and woodworking equipment in the vicinity of the lamination or even better, perform the lamination in a clean room / environment
- ✓ Inspect SHAB, ensuring the rear surface particularly is dry, pristine, clean, and free of dust
- ✓ Always leave the peel coat in place on the SHAB when laminating

Lamination Continued

- ✓ When using contact cements, water-based types are generally recommended, however many standard types such as Wilsonart 951 work well
- ✓ Importantly do not allow contact cements contact the face (front) of SHAB
- ✓ Water-based contact cements such as 1000NF by 3M and Wilsonart H2O may work but may need more preparation such as scuffing the rear SHAB layer with 240 grit sandpaper
- ✓ Liquid PURs such as that by Titebond are effective in that they produce excellent adhesion, are waterproof and low in viscosity allowing penetration into the pores of the substrate. However, they may be difficult to apply to the substrate such that the thickness is very fine and flat
- ✓ If using a PUR adhesive, a faster and superior bond may be achieved by dampening the substrate with a mist of water or moist cloth. This is because PUR needs moisture to activate and cure
- ✓ When using any glue for the first time to adhere the SHAB, perform a preliminary test on a small piece for 24 hours. This test should be for adhesion and impact / effect of the adhesive on the SHAB
- ✓ When using adhesives, consider that while applying to both rear of SHAB and substrate surface will often produce a stronger bond, the finish will generally be worse due to thicker adhesive increasing possibility of visual telegraphing especially in gloss finishes
- ✓ Adhesives can be sprayed, rolled, painted, trowelled or brushed on. It is crucial to achieve an even finish covering all areas of the surface being applied to. Thinner and even layers of adhesive facilitate a superior finish
- ✓ Two sided tapes such as 9505 by 3M can work excellently if applied properly. These tapes allow plenty of open time for orientation of the SHAB to correct position but when set, they produce a very strong bond. The tape should be applied to the rear of the SHAB first. Mechanical means (via roller type set up) generally produce a superior bond and help to prevent / minimize air bubbles.
- ✓ Whether using adhesive or tape, importantly apply SHAB starting at one end using a soft roller or similar to force air from underside of SHAB. Trapped air severely affects the visual result and is a cause of delamination
- ✓ Allow adhesive and tape to cure as per manufacturer's recommendation

Panel Balancing

- ✓ Whether laminating SHAB via manual or mechanical means, panels must be balanced except perhaps if they are used in wall applications where the panel is installed against a flat surface
- ✓ A panel using 0.8mm PETLite SHAB on one side can be balanced with the same on the opposite side or other materials such as 0.7 to 1mm cabinet liner, ABS or HIPS
- ✓ Failure to balance panels significantly increases the propensity of panels to warp or bow and is not warranted

Clean-up

- ✓ Clean up adhesive residue using a soft microfiber cloth dampened with a benign solvent such as mineral spirits or kerosene.
- ✓ Never use acetone, paint or lacquer thinners or other aggressive solvents that will attack the PETLite polymer
- ✓ If in doubt, test the cleaner on the face side of a PETLite sample. If after 24 hours, there is no impact such as cracking, grazing, pitting or dulling of gloss finish or glossing of the matte finish, the cleaner will generally be fine.
- ✓ Best practice, however, is to use mineral spirits or kerosene

Care and Maintenance

For general cleaning:

- ✓ For high gloss and supermatte, wipe with soft, clean microfiber cloth dampened with warm soapy water. Nonabrasive liquid dishwashing soap at 5% ratio to warm water is suitable. For more challenging stains, increase ratio of dishwashing soap to 10% and use hotter water (still comfortable to physically touch). If streaks appear, the microfiber cloth is too damp.
- ✓ For gloss only, spray with VuPlex or Novus #1 (blue bottle) (or equivalent) and wipe with soft, clean microfiber cloth
- ✓ For super matte only, spray with Matte Maxx (or equivalent) and wipe with soft, clean microfiber cloth
- ✓ For more persistent stains, test retail cleaning agents such as Windex, Lysol, Fabuloso or Mr Clean on an inconspicuous area of the PETLite panel for compatibility first. Apply cleaner as per manufacturer's instructions and wipe with a microfiber cloth then examine area in 24 hours. If no visible negative impact, then the cleaner should be suitable for use.
- × **Never use abrasive products or cleaners (scouring pads, steel wool, black soap…etc.), bleaching agents, wax furniture polishes, alcohols, solvents, acetone, or paint and lacquer thinners or strongly acidic/alkaline cleaners to clean PETLite products.**

Warranty

PETLite panels, SHAB and edge band are covered by a limited 2-year limited warranty in residential applications and 12 months' limited warranty in commercial applications.

Please refer to the separate complete warranty statement for detailed warranty terms and conditions.

Item
PETLite panels are designed for vertical applications only
PETLite panels are designed for indoor applications only
Exposure to excessive direct or radiant heat >158^{o}F (70^{o}C) is not permitted
General fading, ageing or discoloration are not covered by the warranty
PETLite panels and matching laminate are not covered for any change in color due to exposure to any UV light
Some deviation in color or minor ripples/dents are not covered by the warranty
Contact with hot gases, steam, or hot objects is to be avoided and any damaged caused by such is not covered under the warranty
Warping, twisting or bowing due to large door dimensions or inappropriate door hinges are not covered by the warranty
Chipping caused by fabrication and during and after installation is not covered by the warranty
Prolonged exposure to excessive moisture is not permitted and will void the warranty
Panel edges must be sealed with PETLite or equivalent edge band
Only follow the recommended care and maintenance guidelines
The warranty covers only the cost of replacement or repair of materials by EGR and does not cover incidental loss, labor or freight associated with replacement or repair