

Product Description

FRL® Fiber Reinforced Laminate is the ideal wall surfacing solution for high traffic environments that need to be aesthetically pleasing and stay looking sharp. A patented product from Panolam® Surface Systems, this Class A solid construction with fiberglass reinforcement gives FRL® panels their unique qualities. These include ease of application, job-site workability, long-lasting style and durability year-after-year. FRL® panels are high-impact resistant, easy to clean and come in a wide range of colors and finishes.

Typical Uses

FRL® laminate is manufactured and tested to perform in locations such as:

- Boat/RV Interiors
- Commercial Kitchens
- Corridors
- Doors/Kickplates
- Elevator cabs
- Headwalls in patient rooms
- Lobbies
- Restrooms/Toilet partitions
- Retail areas/Checkout areas
- Transit systems: bus, subway, rail
- Wainscoting/Wall cladding

Facilities:

- Airports
- Daycare centers
- Hospitals
- Hotels/Casinos/Resorts
- Lab/Clean rooms
- Nursing Homes/Assisted living
- Restaurants/Dining Halls
- Retail environments
- Schools/Universities
- Spas/Health clubs
- Supermarkets

Design

FRL® Panels are available in over 500 colors and patterns, Panolam can also expand your creative vision with in-house custom digital graphics. Whether your design calls for a unique photo, company logo or one-of-a-kind illustrations come to life.

Finish Options

Code	Finish	Description
AW	Ashwood	Fine wood finish with a cathedral grain.
CR	Crystal	Fine pebble grained finish with a medium gloss.
LZ	LineZ	Deeply embossed, linear woodgrain finish.
LN	Linen	Embossed, cloth-like finish.
SL	Soft Leather	Finely grained leather finish.
SD	Suede	Low gloss, textured finish.
WE	Wood Essence	Natural-appearing,, linear woodgrain finish.

FRL® panels can be manufactured with enhanced chemical resistance achieving the same chemical resistance properties as described in our ChemGuard Technical Bulletin.

Sheet Size Availability

Suede (SD), Crystal (CR), Soft Leather (SL), Ashwood (AW) and Wood Essence (WE) are available in 3', 4', 5' widths x 8' & 10' lengths

Linen (LN) and LineZ (LZ) are available standard in 4' x 8'. Other sizes are available on a project by project basis.

All carry a five (5) sheet minimum of a color and size.

Fabrication Tips

Please see our installation guide.

Fire Test Data

Panolam FRL® laminate, when bonded to specified substrates and adhesives, obtained the following results per US Standard UL-723 / ASTM E 84 and Canadian Standard ULC-S102 Test for Surface Burning Characteristics of Building Materials. In addition, Panolam FRL® laminate have the UL Marine Classification based on testing per the 2010 IMO FTP Code. See Underwriters Laboratory website at www.UL.com for more information.

	Type	Sample Configuration	Flame Spread Index	Smoke Developed Values
ULC-S102	FRL, X75	Unbonded	5	70
UL-723 / ASTM E-84	FRL, X62	Unbonded	15	190
	FRL, X75		15	190
UL-723 / ASTM E-84	FRL, X62	Bonded* to Inorganic Reinforced Cement Board	5	130
	FRL, X75		5	130

*Bonded with Franklin Solvent Free Construction Adhesive in accordance with instructions accompanying the adhesive.

All work should be designed, assembled, and installed in compliance with pertinent local fire codes.

Panolam FRL® laminate was tested in accordance with the International Maritime Organization's (IMO) International Code for the Application of Fire Test Procedures (FTP Code), Annex 1, Part 2 - Smoke and Toxicity test. FRL® Laminate meets the requirements of IMO MSC.61 (67), Part 2 for Materials Used as the Surface of Bulkheads, Linings, or Ceilings.

SWRI XM8 Toxicity Test Gas Sampling

SWRI Project #14436.01.303b

Exposure Mode	CO	HBr	HCl	HCN	HF	NOx	SO2
25 kW/m2 without pilot	209 ± 2*	**	**	**	**	**	**
25 kW/m2 with pilot	254 ± 2*	**	**	**	**	**	**
50 kW/m2 without pilot	834 ± 8*	**	**	**	**	**	**
Limit	≤ 1450	≤ 600	≤ 600	≤ 140	≤ 600	≤ 350	≤ 120

* Represents the 95% confidence level in the concentration measurement.

** Represents gas not detected

In order to obtain an IMO certified panel, it must be specially ordered so that it is produced in accordance with all of the procedures and requirements in place. Certified panels can be ordered with the special product code XM8. Also, specify the following fire rated adhesive: Franklin Polymer Construction Mastic #4319. This is the only adhesive product that is noted in our warranty.

Physical Properties
Building and Construction

Property	Test	X62, Sanded Back Typical Results	X75 Typical Results
Nominal Thickness, inches		.062"	0.075"
Nominal Thickness, mm		1.5	1.91
Wear Resistance (cycles)	NEMA 3.13	3,500	3,500
Flexural Strength (psi)	ASTM D790	33,000	22,000
Flexural Modulus (ksi)	ASTM D790	2,000	2,000
Tensile Strength (ksi)	ASTM D638	16,000	16,000
Tensile Modulus (psi)	ASTM D638	2,100	2,000
Tensile Elongation (%)	ASTM D638	0.72	0.67
Water Absorption	ASTM D570	2.23%	0.90%
Dimensional Change MD	NEMA 3.12	0.30%	0.30%
Dimensional Change XMD	NEMA 3.12	0.40%	0.4%
Izod Impact Resistance (ft-lb/in)	ASTM D256		5.0
Ball Impact	NEMA 3.8	28"	60"
Barcol Hardness	ASTM D2583	65	65
Cleanability	NEMA 3.4	7	7
Appearance	NEMA 3.1	Complies	Complies
Light Resistance	NEMA 3.3	Slight Effect	Slight Effect
Boiling Water Resistance	NEMA 3.5	No Effect	No Effect
High Temperature Resistance	NEMA 3.6	No Effect	No Effect
Radiant Heat Resistance (sec ^a)	NEMA 3.10	145	200

¹ Bonded to Inorganic Reinforced Cement Board

^a Strip element method

Codes and Certifications

1. NSF-International Standard 35, “Laminated Plastics for Surfacing Food Service Equipment”.
2. American National Standards Institute/National Electrical Manufacturers Association (ANSI/NEMA), LD3-2005, “High Pressure Decorative Laminate”. Nevamar® Type X75 complies.
3. IMO certified panel, when XM8 is specified.
4. GREENGUARD
5. GREENGUARD GOLD

Limited Warranty

Subject to the limitations set forth below, Panolam® Industries International Inc. (Panolam) expressly warrants that our products are reasonably free of defects in material and workmanship, and when properly handled and fabricated will conform, within accepted tolerances, to applicable manufacturing specifications as set forth in our technical brochure. This warranty shall extend to the original buyer for a period of twelve (12) months from the date of shipment of this product by Panolam, and shall not be assignable by the original buyer. This warranty does not cover damage resulting from accident, misuse, alteration, abuse or lack of reasonable care.

Due to the variety of uses and applications to which this product may be put, and because the manufacturer has no control over the end products fabricated, the warranty set forth above is exclusive and in lieu of all warranties, expressed or implied, in fact or by operation of law or otherwise, or arising by course of dealing or performance, custom or usage in the trade, including, without limitation, the implied warranties of fitness for a particular purpose and merchantability, and Panolam shall have no obligation or liability to any person or entity in connection with or arising from the furnishing, sale, installation or repair, use or subsequent sale of any product supplied by it.

Our maximum liability arising out of the sale of the products or their use, whether based upon warranty, contract, tort or otherwise, shall not exceed the actual payments received by us in connection therewith. In no event shall we be liable for special, incidental or consequential damages, including, but not limited to, arising hereunder or from the loss of profits, or loss of use damages, sales of the products.

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