

lamitech fire rated lam

TECHNICAL DATA SHEET

to ill^aminate

The desire to inspire



Lamitech®
High Pressure Decorative Laminates.

product description

▶ product composition

Lamitech Fire Rated Lam is manufactured with melamine resin, special decorative papers – which provide design and wear resistance – and Kraft papers with phenolic resin – the core base of the laminate –. All of them are subjected to a high specific pressure (100 kg/cm²) and temperature 275°F (135°C). Once the press cycle is finished, the laminate is trimmed, following the established nominal dimensions and sanded to provide a greater adherence when the adhesive is applied over the wooden surface.



▶ recommended applications

Lamitech Fire Rated Lam is recommended for interior standard horizontal and vertical applications where fire codes specify or the environment suggests decorative surfaces that must resist combustion and inhibit smoke production.

All our current laminates meets Class B (II) but, *Lamitech Fire Rated Lam* meets Class A (I) flame spread ratings and is classified by HPVA Laboratory and Testing Service. Test data is obtained by the Steiner Tunnel Test Method of American Society for Testing Materials (ASTM E-84 standard test method for surface burning characteristics of building materials).

This procedure has been cataloged under the following designations: *Certification under the standard UL-723 for military codes compliance MIL-P-17171E (SH), LP-508-H, MIL-STD-1623D (SH) or U.S. Coast Guard. Certification for interior finishes in U.S. Army vessels, are issued solely upon customer request.

Lamitech Fire Rated Lam is particularly designed for surfacing furniture in public places such as hotels, airports, office buildings and institutions as schools, and hospitals. Also ideal for most military and marine applications.

▶ basic limitations

Lamitech Fire Rated Lam is designed for interior uses only, it is not meant to be structural material; it does not admit high humidity or high temperature, exceeding 275°F (135°C). *Lamitech Fire Rated Lam* should not be exposed to intense and continue sunlight. *Lamitech Fire Rated Lam* is offered in any design of our line and exclusively for standard applications, not for postforming. It is important to clarify that for a panel or piece of furniture to be considered fire rated itself all the constituting elements (wooden surface, adhesive, etc.) must comply with the condition of being fire rated, not only the laminate.

product identification

TYPE OF LAMINATE	LAMITECH® GRADE	NOMINAL THICKNESS	SIZES				FINISHES	
		mm (in)	feet (ft)				Gloss	Matte
			4 x 8	4 x 10	5 x 8	5 x 12		
			meters (mt)					
			1.22 x 2.44	1.22 x 3.06	1.53 x 2.44	1.53 x 3.66		
Horizontal Standard Fire Rated Lam	70	1.20 (0.048)	X	X	X	X	X	X
Horizontal Standard Fire Rated Lam	50	1.0 (0.039)	X	X	X	X	X	X
Vertical Standard Fire Rated Lam	30	0.70 (0.028)	X	X	X	X	X	X
Backer Light Fire Rated Lam	01	0.50 (0.020)	X	X	X	X	-	X
Backer Vertical Fire Rated Lam	03	0.70 (0.028)	X	X	X	X	-	X
Backer Medium Fire Rated Lam	05	0.90 (0.035)	X	X	X	X	-	X
Backer High Fire Rated Lam	07	1.10 (0.043)	X	X	X	X	-	X

► useful information

1. Conditioning and storing conditions of *Lamitech Fire Rated Lam* are very important, it should be stored horizontally, at a regular temperature (max. 86°F - 30°C) and relative humidity (max. 60%), in a dry and drafty place.
2. For applications of *Lamitech Fire Rated Lam*, adhesive and wooden surface to be used must be fire retardants and shall comply with the ASTM E84 standard. Both of them shall have the same classification given by the NFPA 101. Get assistance from your wood surface and adhesive suppliers so that the finished good can be used for this purpose. Please contact our sales representatives to obtain further information.
3. To avoid warping in the surface laminated with *Lamitech Fire Rated Lam*, we recommend the use of backer laminate on the back side of the surface, in order to get the maximum humidity absorbed balance in the wooden substrate.
4. *Lamitech Fire Rated Lam* should be cut with circular saws at 8-2 m/min. and 3.000-5.500 r.p.m. speed, the tooth of the saw must be done in plane trapezoidal diamond with alternating geometry. For routed jobs, a cylindrical miller of minimum 12,000 r.p.m. must be used.
5. To perforate *Lamitech Fire Rated Lam* use a tungsten-carbide drill bit with biangular end at 10.000 r.p.m.. The

- selected drill bit must be 0.002 in (0.05 mm.) bigger than the specific diameter of the hole to be made.
6. *Lamitech Fire Rated Lam* is available in two finishes: Gloss and Matte. We recommend for interior standard horizontal and vertical applications where fire codes specify or the environment suggests decorative surface that must resist combustion and inhibit smoking production. To avoid damages on the laminate surface, a protector element such as a wooden or ceramic piece must be used before doing any kind of cut process over it. Also use a similar protector element on the surfaces to put hot objects with temperature exceeding 275°F(135°C).
 7. *Lamitech Fire Rated Lam* offers a long lasting and an easy cleaning surface. For High Pressure applications we suggest you to ask for *Lamitech Fire Rated Lam* covered with protective film to prevent any scratch or stain on the surface of the laminate during transportation, handling and application - that can seriously affect the final properties on the surface of the laminate.
 8. *Lamitech Fire Rated Lam* provides a long-life surface and easy maintenance. It is not suited for laboratory surfaces, where corrosive material, alkalis and strong acids are used in its daily work.

technical specifications					
* NEMA LD.3/ EN-438 TEST METHOD	PROPERTY	UNITS	LAMITECH® S Grade 30	NEMA LD3 VGF	EN-438 VGF
	NOMINAL THICKNESS	In (mm.)	0.028 (0.70)	0.028 (0.70)	-
	THICKNESS TOLERANCE	In (mm.)	+/- 0.004 (+/- 0.10)	+/- 0.004 (+/- 0.10)	-
3.1 / 4.0	APPEARANCE	defects	No A,B,C defects	No A,B,C defects	-
3.3 / 27	LIGHT RESISTANCE	effect/gray scale	5	SL	4 - 5
3.4 / 26	CLEANABILITY	Rating (max.)	12	20	-
	STAIN RESISTANCE				
	Reagents 1-10	Rating (min.)	NE	NE	-
	Reagents 11-15	Rating (min.)	SL	M	-
	Group 1	grade	5	-	5
	Group 2	grade	5	-	5
	Group 3	grade	4	-	4
3.5	BOILING WATER RESISTANCE	effect	NE	NE	-
3.6 / 16	HIGH TEMPERATURE RESISTANCE	effect/grade	SL	SL	4
3.7 / 25	SCRATCH RESISTANCE	grade (min.)	2	2	2
3.8 / 21	BALL IMPACT RESISTANCE	In (mm.) min.	39 (1,000)	20 (500)	24 (600)
3.11 / 17	DIMENSIONAL CHANGE				
	Direction Machine	% máx.	0.50	0.70	0.75
	Cross Machine	% máx.	0.80	1.20	1.25
3.13 / 10	WEAR RESISTANCE	Cycles (min.)	600	400	350
3.14 / 32	POST-FORMABILITY	In (mm.) Radio, min.	NA	NA	NA
3.15 / 34	BLISTER RESISTANCE	Sec (min.)	NA	NA	NA

SL=Slight Effect=4, NE=No Effect=5, M=Moderate=3, NA=Not Applicable, S=Standard, PF=Post-Formable
* Nema LD.3 America and EN-438 Europe

► limited warranty

Lamitech S.A., warrants that its products are reasonably free of defects, and when properly used, will comply with normal deviations to related manufacturing specifications. This warranty will be extended only to the original buyers for a period of one (1) year from the purchase date. It excludes damage resulting from accidents, abuse or lack of care, improper use and/or any alteration.

Since Lamitech laminates have a wide range of applications, without the possibility of control over the manufacturing of the end product, Lamitech does not assume obligations or liabilities arising from the furnishing, sale, installation or repair, use or subsequent sale of any product, to any person or entity.

The contents of this brief correspond to common knowledge of High Pressure Laminates. Lamitech offers this information solely to provide suggestions for your application. Since it's impossible to anticipate all variations in actual end use conditions, no warranties or liabilities can be assumed by Lamitech in connection to the use of this information. Lamitech believed the information and recommendations provided herein to be accurate at the time of preparation or obtained from sources believed to be generally reliable. Lamitech can modify it without prior notice.

▶ typical data from the fire test

The typical data for the *Lamitech Fire Rated Lam*, are obtained from the Stenier Tunnel test, under the American Society for Testing Materials (ASTM E-84. Analysis methods to determine the fire rated characteristics in construction materials). Certified by HPVA (Hardwood Plywood & Veneer Association Laboratory and Testing Service), PO Box 2789, Reston, Virginia 20195 USA • Tel: 703 435 2900 • Fax: 703 435 2537.



▶ purpose

The purpose of the analysis is to determine the relative performance of the tested material under fire exposure. The results are given by the fire propagation and the smoke generation. Test results derive from a comparison of the values obtained on the analyzed samples vs. the materials that are considered as standard; asbestos, with a flame propagation of zero (0) and oak, that presents a flame propagation of one hundred (100).

The widest world system of classification accepted by the National Association of Fire Protection and safe life code in the United States is the NFPA 101. Its codification is the following.

- CLASS A0-25 FLAME PROPAGATION 0-450 SMOKE GENERATION
- CLASS B26-75 FLAME PROPAGATION 0-450 SMOKE GENERATION
- CLASS C76-200 FLAME PROPAGATION 0-450 SMOKE GENERATION

Lamitech Lam "fire rated" test results under the code NFPA 101

TYPE NEMA	LAMITECH PRODUCT	CERTIFIED BY HVPA	CLASS NFPA 101	FLAME SPREAD INDEX/ SMOKE DEVELOPED
VGf	VGf	T-10718	A	25/80 (Unbonded)
VGf	VGf	T-10772	A	20/20 (Bonded)

▶ codes and certifications

GENERAL FIRE CODES

The data for the analysis ASTM E-84 have been homologated under the following international norms:

- American National Norms Institute: ANSI N°. 2.5
- National Protection Agency: NFPA N°. 225
- Securing Laboratories: N°. 723
- Uniform Construction Code: N°. 42-1

The test is the data base for the fire codes written by several responsible groups, including:

- BBC: Basic Construction Code (Official Conference of Construction in America. Used in Middle East and North East).
- NFPA: National Fire Protection Agency (Construction Base Code , Section # 101).
- SSBC: Meridian Standard Construction Code (Meridian Construction Code Assembly. Mainly used in the South).
- UBC: Uniform Construction Code (Official Construction International Conference (ICBO). Used in Western States).

