



**Lamitech® AST LAM**

**PRODUCT DESCRIPTION**

**Recommended Applications:** The *AST Lam* (Advance Surface Technology Laminate)\* is recommended for horizontal applications such as kitchen countertops, cafeterias tables, stands, working surfaces, etc, where the style and beauty of gloss finish with higher scrub resistance for a longer durability is required. (\*The AST concept does not mean wear or scatch resistance, but the ability of the surface of the laminate to resist scrubbing)

**Composition:** The *AST Lam* is manufactured special decorative papers, treated with special melamine resin – which provide design and surface resistance – and Kraft papers with phenolic resin – the core support of the laminate –. All of them are subjected to a high specific pressure (100 kg/cm<sup>2</sup>) and 135°C (275°F). Once the press cycle is finished, the lami nate is trimmed, following the established nominal dimensions and sanded to provide a bigger adherence when the adhesive is applied over the wooden surface.

**Basic Limitations:** The *AST Lam* is designed for interior uses only, it is not ment to be structural material; it does not withstand high humidity or high temperature, exceeding 135°C (275°F). The *AST Lam* should not be exposed to intense and continue sunlight. Due to the material that gives the laminate its advantage scrub resistance, the tone in the designs may vary slightly from those other Lamitech products. Ask for the approved line for this kind of applications and their samples to make color selections. Please contact our sales representatives for further assistance.

PRODUCT IDENTIFICATION								
LAMINATE TYPE	SIZES						FINISHES	
	4 x 8 ft. (1.22 x 2.44 m.)	4 x 10 ft. (1.22 x 3.06 m.)	4.5 x 10 ft. (1.375 x 3.050 m.)	4.5 x 12 ft. (1.375 x 3650 m.)	5 x 8 ft. (1.53 x 2.44 m.)	5 x 12 ft. (1.53 x 3.66 m.)	GLOSS	TEXTURE
Horizontal Standard <i>AST Lam</i>	YES	YES	YES	YES	YES	YES	YES	NO
Horizontal Postforming <i>AST Lam</i>	YES	YES	YES	YES	YES	YES	YES	NO
Vertical Postforming <i>AST Lam</i>	YES	YES	YES	YES	YES	YES	YES	NO

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### Useful Information

1. Conditioning and storing of the *AST Lam* are very important, it should be stored horizontally, at a regular temperature (max. 30°C 86°F) and relative humidity (max. 60%), in a dry and drafty place.
2. For manual, low press applications of *AST Lam* we strongly recommend the use of contact adhesive in a solvent/neoprene base. Use PVA adhesive (Polyvinyl Acetate) for industrial applications, this adhesive does not react with heat and also has a high humidity resistance. To get a good adherence, we suggest you use 80-140 g/m<sup>2</sup> of adhesive and a pressure of 7-9 k/cm<sup>2</sup>. In case of having any waste of adhesive in the laminate while finishing the application, remove it with a soft cloth and organic solvent or a mixture of 50:50 alcohol-organic solvent.
3. To avoid warping in the surface coated with Lamitech *AST Lam*, we recommend the use of backer laminate on the back side of the substrate.
4. *AST Lam* should be cut with circular saws at a 8-12 m/min. and 3,000-5,500 r.p.m. speed, the tooth of the saw must be 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 *AST Lam* use a tungsten-carbide drill bit with biangular end at 10,000 r.p.m. The selected drill bit must be 0.002 inches (0.05 mm.) bigger than the specific diameter of the hole to be made.
6. Lamitech *AST Lam* is only available in Gloss finish. We recommend the use of textured laminates in horizontal surfaces as cafeteria tables, desks, kitchen countertops, etc. To avoid damages on the laminate surface, a protection element as a wooden or ceramic piece must be used before doing any kind of cut labor over it. Also use a similar protector element on the laminates to put hot objects with temperature exceeding 135°C (275°F).
7. When postforming *AST Lam* is required, you may first check the instruction in our manual for postforming.
8. For stain cleaning or maintenance of the *AST Lam*, use water, soft non-abrasive detergents and nylon brushes. Stubborn stains may require the use of hypochlorite bleach dissolved in water. Avoid the use of strong bleachers, organic detergents and abrasive brushes, these could discolor the surface. Grease stain should be cleaned with a soft cloth and organic solvent or a mixture of 50:50 alcohol-organic solvent, the laminate shall be free of stain without any deterioration of its color tone or its original design.
9. High Pressure *AST 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 labor because their damage will be inevitable. The laminate's stain resistance is high, however, ink stain (pen, seal, etc) are difficult to remove and will always leave a residual shape on the surface.



<b>AST LAM</b>					
<b>*NEMA LD.3/EN-438 TEST METHOD</b>	<b>PROPERTY</b>	<b>UNITS</b>	<b>LAMITECH HGP Grrade 50</b>	<b>NEMA LD.3 HGP</b>	<b>EN-438 HGP</b>
	NOMINAL THICKNESS	In (mm.)	0.039 ( 1.0 )	0.039 ( 1.0 )	-
	THICKNESS TOLERANCE	In (mm.)	+/- 0.005 ( +/- 0.12 )	+/- 0.005 ( +/- 0.12 )	-
3.1 / 4.0	APPEARANCE	Defects	No A,B,C Defects	No A,B,C Defects	-
3.3/27	LIGHT RESISTANCE	Effect/Gray scale	NE 5	EL -	- 4-5
3.4/26	CLEANING PROPERTIES	Max. Effect	12	20	-
	STAIN RESISTANCE				
	REAGENTS 1-10	Rating	NE	NE	-
	REAGENTS 11-15	Rating	EL	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	3	M	3
3.7/25	SCRATCH RESISTANCE	Grade (Min)	3-4	3	3
3.8/21	BALL IMPACT RESISTANCE	In(mm.) Min.	47 (1200)	30 (750)	32 (800)
3.11/17	DIMENSIONAL CHANGE				
	LONGITUDINAL	% max.	0.30	1.1	0.55
	TRANSVERSAL	% max.	0.70	1.4	1.05
3.13/10	WEAR RESISTANCE	Cycles (mín.)	1000	400	350
3.14/32	POST-FORMABILITY	In (mm.) Radio, min.	7.5	16.0	18.0
3.15/34	BLISTER RESISTANCE	Sec. (min.)	15	15	15
BS ISO 11998	SCRUB RESISTANCE	Grade #, Max Mass loss (mg)	# 4, 10 mg	-	-

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



Scrub Resistance test: This test measures the *AST Lam* resistance to erosion and surface scratch caused by the scrubbing of abrasive elements such as sand paper as nylon brushes.

Test description: A 15x43 cms sample of *AST Lam* is placed over an horizontal panel of an Abrasion Tester BYK – GARDNER AG-8100 .Once secured, it is scrubbed with a 3500 gr load covered by an abrasive paper 3M 431Q Grit 100, over a 50 cycle's period. Then, for visual inspection the sample is cleaned with an alcohol moisted cloth and weighed to report the amount of material loss.

Grading Criteria  
Appearance

<u>GRADE</u>	<u>CHARACTERISTICS</u>
5	No visible changes (no lines, marks or wear off)
4	Discontinuous thin lines
3	Continuous thin lines
2	Thick lines along the laminate
1	Visible damage in the abrasive area, change in the color and the appearance of the laminate finish.

Eroded Material:

The eroded material from the *AST Lam*, resulting from scrubbing, should not be greater than 10 mg.

*AST Lam* Performance Vs Standard surface

The *AST Lam* complies with the number 4, classification criteria y and a quantity of eroded material lesser than 10 mg Vs standard surface laminates have eroded material more than 100 mg and grade #1.



Limited Warranty: Lamitech 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.