

PLUS - Dry-erase Marker Board

Technical Bulletin



Product Description

Composition

The PLUS Dry-erase Marker Board Lam is manufactured with special decorative paper saturated with melamine resin modified with special additives to add the erasing properties to the laminate and kraft paper with phenolic resin which constitute the core of the laminate. This set is subjected to a specific pressure of 90kg/cm² and a temperature of 135°C (275°F). Once the PLUS Dry Erase Board Lam is pressed, it is cut in nominal dimensions and sanded on its back to provide greater adhesion when applied with adhesive on the wood substrate.

Recommended Uses

The PLUS Dry-erase Marker Board Lam offers high performance regarding conventional laminates for this kind of application. The PLUS Dry Erase Board Laminate is easy to maintain and allows an improved erase free of stains and traces of residual inks after use. It is mainly used for institutional furniture in training centers, colleges, schools and universities.

Product identification							
LAMINATE TYPE	LAMITECH GRADE	NOMINAL THICKNESS	SIZES			FINISHES	
		mm. (Inch)	4 x 8 pies / ft	4 x 10 pies / ft	5 x 12 pies / ft	GLOSS	MATTE
Horizontal Plus Marker Board Lam	70	1.20 (0.048)	X	X	X	X	-
Horizontal Plus Marker Board Lam	50	1.00 (0.039)	X	X	X	X	-
Horizontal Plus Marker Board Lam	30	0.70 (0.028)	X	X	X	X	-

Basic Limitations

The PLUS Dry-erase Marker Board Lam is designed for interior uses only, it is not meant to be structural material; it does not withstand high humidity or temperatures exceeding 135°C (275°F). The PLUS Marker Board Lam should not be exposed to intense and continue sunlight. The PLUS Marker Board Lam must be subjected to periodical maintenance, it must be cleaned with an alcohol moisted cloth, considering that dry markers are oil based and they leave accumulative residual material on the laminate. Please contact our sales representatives to consult our approved references and further assistance (Available in solid colors).

Erase Test

As the erasure test is subjective and often the result depends on variables such as the type of marker, the type of eraser, the ambient temperature and the relative environmental humidity in which the PLUS Dry Erase Board Laminate is installed; It has been established, as an international PLUS to certify the quality and performance of erasure of this type of products, the following erasure test:

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- Test # 1. Write on the laminate with a commercial dry erase marker and erase immediately with a dry cloth, this may (sometimes) show slight shadows. Clean with commercial alcohol and if these do not disappear, then the laminate does not meet the quality specifications.
- Test # 2. Write on the laminate with a commercial dry erase marker and erase after 24 hours with a dry cloth, this may (sometimes) show slight shadows. Clean with commercial alcohol and if these do not disappear, then the laminate does not meet the quality specifications.
- Test # 3. Write on the laminate with a commercial dry erase marker and erase after 7 days with a dry cloth, this may (sometimes) show slight shadows. Clean with commercial alcohol and if these do not disappear, then the laminate does not meet the quality specifications.
- Test # 4. Write on the laminate with a commercial dry erase marker and place the sample for 7 days in a laboratory oven at 103 ° F (40 ° C). Once the time is up, erase with a dry cloth; This may (sometimes) show slight shadows. Clean with commercial alcohol and if these do not disappear, then the laminate does not meet the quality specifications.

Lamitech PLUS Dry-erase Marker Board Lam satisfies all four tests satisfactorily.

Useful Information

1. The PLUS Dry-erase Marker Board Lam must be conditioned and stored in a dry and ventilated place, never outdoors, It must be stowed horizontally and stored as far as possible at room temperature below 30°C and relative humidity less than 60%.
2. In the selection of the adhesive to be used there are several alternatives, the most common is solvent- neoprene based contact cement, which is recommended for manual applications where the pressure exerted is low. When it comes to industrial applications, we recommend PVA (polyvinyl acetate) adhesives, which are not reactivable with heat and have high resistance to moisture. For a good adhesion of the PLUS Dry-erase Marker Board Lam, we recommend using between 80 and 140gr/m² of PVA adhesive and exerting a pressure of 2 to 3kg/cm². At the end of the application, if adhesive residue remains on the laminate, clean the surface with a soft cloth dampened with organic solvent varsol or with a 50:50 mixture of alcohol-organic solvent. It should be rinsed with warm water by completely removing the solvent.
3. To prevent the plating surface with PLUS Dry-erase Marker Board Lam from buckling or deforming, we suggest applying the backer or balance laminate on the back side of the veneer, in order to obtain the optimum balance in the moisture absorbed by the wood layer. It is recommended that the PLUS Dry- erase Marker Board Lam and its backer be the same thickness.

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4. The cutting of the PLUS Dry-erase Marker Board Lam should be done with disc saws with speeds between 8-12m / min. and 3000 to 5500r.p.m., with flat trapezoidal alternating geometry. For routing work you must use cylindrical drills of 12000r.p.m., Minimum.

5. To drill the PLUS Dry-erase Marker Board Lam, use 10000r.p.m drills. With tungsten-carbide bits with a biangular tip, the selected bit should be 0.002 inches (0.05mm.) larger than the diameter of the hole to be made.

6. To ensure the maintenance in good condition of the surface of the PLUS Dry-erase Marker Board Lam we recommend requesting the product coated with protective film, which ensures that the surface is free of scratches and dirty during transport, handling and application, factors that seriously affect the quality laminate finish

Maintaining & Cleaning Instructions

Initial Board Conditioning & Daily Maintaining

Warning: Perform frequent cleaning of the board to avoid accumulation of dirt or grease, since in these conditions neither the surface nor the markers will work properly.

1. Use a NEW marker, avoid using weared markers and store it in a horizontal position. Use recognized brands.
2. Erase with a MICROFIBER cloth. Avoid using your hand to erase or other types of erasers that are not micro-fiber.
3. Clean with soft cloth making circular movements. Wash the cloth frequently to avoid accumulation of pigments.

The erasing properties of the board will improve and will be maintained over time if the indicated recommendations are followed.

Solvents for routine cleaning:

1. Liquid soap for dishes non-abrasive soaps.
2. Ammonia based glass cleaners and / or vinegar.

Solvents for permanent stains:

1. Ethanol (Ethyl Alcohol) or Isopropyl Alcohol.
2. Nail polish remover.

Avoid surface contact with fatty substances.

Clean with water + Soft cloth (non-abrasive) + solvent	
WEEK 1 Once a day	WEEK 2 (and thereafter) Once weekly

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Cleaning And Disinfection Instructions

For routine cleaning of Laminate PLUS Dry Erase Board, it is recommended to use water, mild non- abrasive soaps and a soft cloth such as microfiber. Do not use the abrasive side of the sponge, it is normally green.

For cleaning difficult stains such as: Tea, coffee, pencil, chalk, grease stains, dust or soap residue, use household cleaning agents such as grease remover soaps, Binner cleaner for dust and shine , odorless varnish, window cleaner, liquid soaps, or 0.1% strength sodium hypochlorite solution. It is important that the cleaning is done for a maximum of 5 minutes and then thoroughly clean the surface with water and a clean cloth.

All of our Laminate Dry Erase Board PLUS is antibacterial and resistant to highly effective common disinfectants for the removal of SARS-CoV-2, the cause of Human Coronavirus disease, meeting the criteria of the EPA (United States Environmental Protection Agency ^(2*)). For disinfection work, use disinfecting agents such as:

- Sodium hypochlorite, brands such as Clorox Bleach, which comes in concentration between 4.5% and 5.5%. This product should mix one part of hypochlorite with 10 parts of water. Disinfection is obtained with 0.5% sodium hypochlorite in water.
- Ethyl alcohol (70% Ethanol), to disinfect the laminate surface use this solution and a clean cloth.
- Quaternary ammonium at 0.1% concentration, it is recommended to use products such as Durobacter TC - 31 which comes with a concentration of 10% of active component, for this mix one part of the product with 99 parts of water and clean with a cloth soft.
- Hydrogen peroxide, this product contains hydrogen peroxide in a concentration of less than 3%, the solution is applied to the laminate surface with a clean cloth.

After 5 minutes of carrying out the disinfection process, the cleaning process should proceed, long exposure times of sodium hypochlorite, hydrogen peroxide, quaternary ammonium and other disinfection products can generate deterioration in the high pressure laminate.

(2*) <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

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Cleaning And Disinfection Chart

Product name	Active ingredient	Purpose	Recommended concentration (%)	Max contact time (minutes)	Formulation type	Should it be cleaned after using the product?
Clorox Bleach	Sodium hypochlorite	Routine cleaning	<0,1	N.A.	Dilute 1 part bleach in 50 parts water	No
Clorox Bleach	Sodium hypochlorite	Difficult stains cleaning	0,1	3	Dilute 1 part bleach in 50 parts water	Yes
Clorox Bleach	Sodium hypochlorite	Disinfection	0,5	5	Dilute 1 part of Bleach in 10 parts of water	Yes
Ethyl alcohol	Ethanol	Disinfection	70	5	Use 70% commercial formulation	No
Peroxide	Hydrogen peroxide	Disinfection	<3	5	Use 3% commercial formulation	Yes
Durobacter TC-31	Quaternary ammonium	Disinfection	0,1	5	Dilute one part of the product in 99 parts of water	Yes

Useful Cleaning Tips

To obtain the best results when clean the PLUS Dry-erase Marker Board Lam, it is very important to remind the following tips:

A PLUS Dry Erase Marker Board Lam should NEVER be cleaned with products containing abrasives, metal sponges, sanding paper or Steel wool. Avoid strong acid or alkaline substances because the surface can be irreversibly stained.

Chlorinated substances can degrade and discolor the surface. Sodium hypochlorite must be used at concentrations under 5% allowing continuous contact not more than 5 minutes and, after cleaning, surfaces must be rinsed by using enough mild temperature water and soft clothes.

Hydrogen peroxide must be used at concentrations under 3% allowing continuous contact not more than 5 minutes and, after cleaning, surfaces must be rinsed by using enough mild temperature water and soft clothes.

When solvents are used, cloth should be very clean to avoid residual marks on the PLUS Dry Erase Marker Board Lam. It is recommended to wash out and rinse with mild temperature water.

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Do not use furniture restoration products or oil-based cleaning products because they tend to leave residual grease on the surface that traps dirty particles. Do not use metallic scrapers, metallic brushes or any other metallic tool to remove residuals from the PLUS Dry Erase Marker Board Lam, like gypsum or dry paint because surface can irreversibly damage.

Instructions For Removing Difficult Stains

Acetone or nail remover, alcohol, gasoline, turpentine, White spirit, trichloroethylene, perchloroethylene and thrichloroethane are suitable to remove neoprene residues.

3M Graffiti Remover, paint diluent or Hauser Vandal are some commercial substances that can be used. Remember to always rinse by using enough water.

Note: Product Brand names are only suggestions and its effectivity is not guaranteed.

It is the responsibility of the distributor / installer to verify the updated technical documents updated on the respective website. Visit us at www.surfacematerials.com for more information.

VERSION FEB2021 This document supersedes all printed and electronic technical and installation guides previously distributed by LAMITECH.

TECHNICAL DATA SHEET

Test	Standard	Field	Unit	Lamitech
Density	ISO 1183	Mass	g/cm ²	≥ 1.35
Length and width	EN 438 2-6	Size	mm	+5/-0
Straightness of edges	EN 438 2-7	Plate	mm/m	≤ 1.5
	EN 438 2-8	Size	mm/m	≤ 1.5
Squareness	Lamitech	1220 x 2440 mm	mm	≤ 4.0
		1220 x 3060 mm		≤ 5.0
		1530 x 3660 mm		≤ 6.0
		1530 x 2440 mm		≤ 4.5
Resistance to surface wear	EN 438 2-10	Initial point	Cycles	300
		Final Wear	Cycles	600
Scratch resistance	EN 438 2-25	Force	Newtons (min)	≥ 2
Surface quality *	EN 438 2-4	Stains, dirt, similar defects on the surface	mm ² /m ²	≤ 1
		Fibers, hairs and stripes	mm/m ²	≤ 10
Thickness	EN 438 2-5	Size	mm	0.7 ± 0.10
				1.0 ± 0.12
				1.2 ± 0.12
Resistance to boiling water immersion	EN 438 2-12	Appearance other finishes	Grade	≥3
		Appearance of edges	Grade	≥3
High temperature dimensional stability	EN 438 2-17	Longitudinal	% e <2.0mm	≤0.60
		Transversal	% e <2.0mm	≤0.90
Resistance to light (Xenon arch lamp)	EN 438 2-27	Contrast (Grayscale)	Grade	≥4
Resistance to dry heat (160°C/320 °F)	EN 438 2-16	Appearance	Grade	≥3
Moist heat resistance (100°C/212 °F)	EN 438 2-18	Appearance	Grade	≥4
Resistance to stains	EN 438 2-26	Appearance group 1-2	Grade	5
		Appearance group 3		≥4
		Spring force		Newton (min)
Resistance to impact by small diameter ball	EN 438 - 20	Spring force	Newton (min)	20

* The total allowable length of contamination may be concentrated in one defect, or dispersed in an unlimited number of smaller defects.