Laminex®

Technical Data Sheet

Compact Laminate

Laboratory

Summary

Laminex® Compact Laminate - Laboratory with Protec+™ anti-microbial surface performance, is a high pressure decorative compact laminate manufactured especially for demanding chemical laboratory environments. The range has been extensively tested against 130+ chemicals and staining agents to ensure its integrity. It has an Electro Beam Cured (EBC) surface for extra stain resistance and hygiene.

Applications

- Laboratory Benchtops
- Specialised Laboratory Furniture
- High wear commercial furniture / partitions

Functional Benefits

Horizontal Application | Vertical Application | Stain Resistant | Chemical Resistant | Water Resistant | Tactile | UV Stable Indoor Use | Impact Resistant | Scratch Resistant | Antimicrobial

Product Characteristics

Attribute	Description
Product Category	Compact Laminate
Substrate Type	Black Core
Sheet Size	3600 x 1500mm
Thickness *(nominal)*	13mm, 16mm
Weight *(Kg/m2 approx.)*	18.5
Decorative Surfaces	D/S
Finish	Carbide
Colour/Pattern/Size	To view the full range, please visit www.laminex.com.au for the National Availability Guide

Dimensional Tolerance **(Tested to EN 438-4)**

Attribute	Description
Thickness	12.0 ≤ t < 16,0 mm ± 0.60 mm 16.0 ≤ t < 20,0 mm ± 0.70 mm (t = nominal thickness)
Length and Width*	+ 10 mm / -0mm
Flatness#	10.0 mm ≤ t : 3.0 mm/m (t = nominal thickness)
Straightness of edges*	1.5 mm/m maximum deviation
Squareness*	1.5 mm/m maximum deviation

Provided the laminates are stored in the manner and conditions recommended by the manufacturer, they shall comply with the flatness requirements specified in the above table when measured in accordance with EN 438-2, Clause 9. The flatness values specified in the above table apply to laminates with two decorative faces. Limits for laminates with one face sanded shall be agreed between supplier and customer.

* Tolerances for cut-to-size panels shall be agreed between supplier and customer.

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Surface Quality (Tested to EN438-2:2005)

Attribute	Minimum Values
Inspection Guidelines	Viewing distance 0.75 to 1.5m from laminate surface Light intensity approximately 800 to 1000 lx at the laminate surface Using normal vision, corrected if necessary. No magnification devices
Dirt, Spots & Similar Surface Defects	The admissible size of defects is based on a maximum contamination area equivalent to 1.0mm²/m² and is proportional to the sheet size under inspection The total admissible area of contamination may be concentrated in one spot or dispersed over an unlimited amount of smaller defects
Fibres, Hairs & Scratches	The admissible size of defects is based on a maximum contamination length equivalent to 10mm/m² and is proportional to the sheet size under inspection The total admissible length of contamination may be concentrated in one defect or dispersed over an unlimited amount of smaller defects

Surface Performance (Tested to EN 438-2: 2005)

Property		Test Method (EN438-2 Clause No.)	Property or Attribute	Unit (Max. or Min.)	Values CGS
Resistance to	**Surface Wear**	10	Wear Resistance	Revolutions (min.) Initial point Wear value	 150 150
	Immersion in Boiling Water	12	Mass increase Thickness Increase Appearance	% (max.) t ≥ 5 mm % (max.) t ≥ 5 mm (t = nominal thickness) Rating (min.) Textured finish	 2.0 2.0 4
	Water Vapour	14	Appearance	Rating (min.) Textured finish	4
	Wet Heat at 100°C	EN12721	Appearance	Rating (min.) Textured finish	4
	Dry Heat at 160°C	16	Appearance	Rating (min.) Textured finish	4
Dimensional stability at elevated temperature		17	Cumulative Dimensional Change	% (max) t ≥ 5 mm L t ≥ 5 mm T (t = nominal thickness)	 0.30 0.60
Resistance to	**Impact**	21	Drop Height	mm (min.) 6 ≤ t (t = nominal thickness)	Large Diametre Ball 1800
	cracking under stress/ crazing	24	Appearance	Grade (min.)	4
	Scratching	25	Force	Rating (min.) Textured finish	 3 = 2N actual ≥ 4.5
	Staining	26	Appearance	As specified in the Chemical Resistance table.	
	Moisture	ISO 2924.1:1998 26	Appearance		4
Lightfastness		27	Contrast	Grey scale rating	4 to 5
Flexural Modulus		EN ISO 178	Stress	Mpa (min.)	9000
Flexural Strength		EN ISO 178	Stress	Mpa (min.)	80
Tensile Strength		EN ISO 527	Stress	Mpa (min.)	60

Surface Performance (Tested to EN 438-2: 2005)

Property	Test Method (EN438-2 Clause No.)	Property or Attribute	Unit (Max. or Min.)	Values CGS
Density	EN ISO 1183	Density	kg/m^3 (min.)	1350

Emissions & Environmental Performance

Attribute	Tested to	Unit	Minimum Values
Formaldehyde	ISO 12460-3	mg/m^{2}h	≤ 3.5

Fire Properties (Typical Values)

Attribute	Tested to	Unit	Requirement
Fire hazard indices	AS/NZS 1530.3		13mm
Ignitability		index	9
Spread of flame		index	9
Heat Evolved		index	6
Smoke Developed		index	4
Cone Calorimeter	AS/NZS 3837		
Group number			3
Average specific extinction area -13mm		m^2/kg	97.4
Average specific extinction area – 6mm		m^2/kg	61.9
Average heat release rate – 13mm		Kw/m^2	104
Average heat release rate – 6mm		Kw/m^2	107

Protec+® Antimicrobial Technology

Laminex Laboratory Compact with Protec+ contains antifungal and antibacterial resistant properties which do not wash off or leach out of the surface. It is safe for use in food preparation and processing activities and can be in direct contact with food, provided that good hygiene practices are followed.

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Chemical Testing

Chemical	Light	Mid	Dark
Acids			
Acetic Acid (40%,98%,100%) or Acetic Acid (40 - 100%)	5	5	5
Amidosulfonic acid descaling agents (< 10%)	5	5	5
Boric acid	5	5	5
Chromic Acid (10%, 60%) or Chromic Acid (10 - 60%)	5	5	5
Citric acid 10%	5	5	5
Dichloroacetic Acid	5	5	5
Formic Acid 10%	5	5	5
Formic Acid 85/90%	5	5	5
Hydrochloric Acid (3%, 7%, 10%, 37%) or HCL (3 - 37%)	5	5	5
Hydrofluoric Acid 48%	5	5	5
Nitric Acid (5%, 20%) or Nitric Acid (5-20%)	5	5	5
Nitric Acid 30%	3	5	4
Nitric Acid 65%	2	5	2
Nitric Acid 70%	2	4	2
Nitric Acid 65% : Hydrochloric Acid 37% (1:3)	3	5	5
Perchloric Acid 60%	5	5	5
Phosphoric Acid 85%	5	5	5
Sulphuric Acid 5%	5	5	5
Sulphuric Acid (11%, 25%, 33%) or H2SO4 (11 - 33%)	5	5	5
Sulphuric Acid 77%	4	5	5
Sulphuric Acid 85%	4	5	5
Sulphuric Acid 98%	4	4	4
Sulphuric Acid 77% :Nitric Acid 70% (1:1)	2	4	2
Sulphuric Acid 85%:Nitric Acid 70% (1:1)	2	3	2
Base			
Ammonia Hydroxide 28%	5	5	5
Barium hydroxide	5	5	5
Calcium hydroxide	5	5	5
Potassium Hydroxide (15%, 42%) or KOH (15 - 42%)	5	5	5
Sodium carbonate (saturated)	5	5	5
Sodium Hydroxide (8%,10%,20%, 25%,40%,46%, 50%) or NaOH (8 - 50%)	5	5	5
Sodium Hydroxide flake	5	5	5
Solvents			
Acetic anhydride	5	5	5
Acetone	5	5	5
Acetonitrile	5	5	5
Ammonia - commercial concentrate 10%	5	5	5
Butanol (Isoamyl Alcohol)	5	5	5
Carbon Tetrachloride	5	5	5
Chloroform	5	5	5
Dichloromethane	5	5	5
Diethyl Ether/Ether	5	5	5
Dioxane	5	5	5
Ethanol/Ethyl alcohol	5	5	5
Ethyl Acetate	5	5	5
Ethylene Glycol	5	5	5
Hexane/n-Hexane	5	5	5
Isopropanol/Isopropyl alcohol	5	5	5
Methanol/Methyl alcohol	5	5	5
Methyl Chloride	5	5	5

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Chemical	Light	Mid	Dark
Methyl Ethyl Ketone	5	5	5
Methyl isobutyl ketone (4-Methyl-2-pentanone)	5	5	5
Mineral oil	5	5	5
Mineral spirits	5	5	5
Mono Chlorobenzene (Chlorobenzene)	5	5	5
Naphthalene / Naphtha	5	5	5
n-Butyl Acetate	5	5	5
Other organic solvents	5	5	5
Tetrahydrofuran	5	5	5
Toluene	5	5	5
Trichloroethylene	5	5	5
Xylene	5	5	5
Organic Chemicals			
Amyl Acetate / Iso amyl acetate	5	5	5
Benzene	5	5	5
Cresol	5	5	5
Dimethylformamide	5	5	5
Formaldehyde (10%, 37%) or Formaldehyde (10 - 37%)	5	5	5
Furfural	5	5	5
Gasoline	5	5	5
Phenol 85/90%	5	5	5
Halogens			
Iodine 0.1N	2	3	4
Iodine Crystal	5	5	5
Iodine tincture / povodine iodine 2%	5	5	5
Tincture of Iodine	5	5	5
Salts			
Calcium hypochlorite	5	5	5
Copper Sulphate 10%	5	5	5
Iron (III) / Ferric Chloride 10%	5	5	5
Potassium Iodide 10%	5	5	5
Potassium Permanganate 1%	3	4	3
Potassium Permanganate 2%	2	3	3
Potassium Permanganate 10%	2	2	2
Silver Nitrate 1%	5	5	5
Silver Nitrate 10%	5	5	5
Silver Nitrate (saturated)	4	5	5
Sodium bisulfite	5	5	5
Sodium Chloride 10%	5	5	5
Sodium Hypochlorite (13%, 16%) or NaOCl (13 - 16%)	5	5	5
Sodium silicate	5	5	5
Sodium Sulfide (saturated)	5	5	5
Zinc Chloride (saturated)	5	5	5
Biological Stains / Staining Agents			
Alizarin Complexone Dihydrate 1%	5	5	5
Basic Fuchsin 1%	4	4	5
Carbol Fuchsin 1%	5	5	5
Carmine 1%	5	5	5
Congo Red 1%	5	5	5
Crystal Violet 0.5%	5	5	5
Eosin B / solution 1%	5	5	5
Gentian Violet 1%	5	5	5

Chemical	Light	Mid	Dark
Giemsa Stain/bloodstain 1%	5	5	5
Hydrogen Peroxide (3%, 20% 30%) or H2O2 (3 - 30%)	5	5	5
Malachite Green Oxalate 1%	5	5	5
Mercurochrome	5	5	5
Methyl orange	4	5	5
Methyl red	4	5	5
Methyl Violet 2B 1%	5	5	5
Methylene Blue 1%	5	5	5
Phenolphthalein 1%	5	4	5
Safranine O 1%	5	5	5
Sudan III 1%	4	5	5
Wright Stain/Wrights blood stain 1%	5	5	4
Hospital And Health Care			
Acridine Orange 1%	5	5	5
Amyl alcohol (Pentanol)	5	5	5
Aniline Blue (1%, 2.5%) or Aniline Blue (1 - 2.5%)	5	5	5
Bromocresol green	5	5	5
Bromothymol blue	5	5	5
Coal Tar solution	5	5	5
Detachol Adhesive Remover	5	5	5
Eucalyptol	5	5	5
Ferric subsulfate purified 13-14%	5	5	5
Glycerinum Iodine Compositum	5	5	5
Haematoxylin	5	5	5
Petroleum jelly	5	5	5
PVP iodine swab	5	5	5
Steri-strip, 1544 Benzoin Tincture	5	5	5
Tincture benzoin compound	5	5	5
Urine	5	5	5
Zephiran chloride (Benzalkonium Chloride) 17%	5	5	5
Zinc oxide	5	5	5
Cleaning Agents			
Acid based metal cleaners	5	5	5
Acid Dichromate/dichromate cleaning sol'n 5%	5	5	5
Alkaline based cleaning agents (10% with water)	5	5	5
Bleaching agents and sanitary cleaners containing them	5	5	5
23% dodecylbenzine sulfonate	5	5	5
Commercial disinfectants	5	5	5
Hydrochloric acid based cleaning agents < 3% HCl	5	5	5
Household Items Or General Items?			
Alcoholic beverages	5	5	5
Animal Fats and Oils (Butter, Olive Oil, Vegetable Oil)	5	5	5
Ball point inks (Blue, Red, Black)	5	5	5
Coffee	5	5	5
Concentrated vinegar	5	5	5
Hair Bleach	5	5	5
Hair Colouring	3	5	5
Hand cream	5	5	5
Lacquers and adhesives (except fast curing materials)	5	5	5
Laundry marking inks	5	5	5
Lipstick	5	5	5
Lyes, soap solutions	5	5	5
Minced Meat (Beef, Lamb, Pork, Chicken)	5	5	5

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Chemical	Light	Mid	Dark
Beef Sausages	5	5	5
Milk (full fat, low fat, skim)	5	5	5
Mustard	5	5	5
Nail varnish	5	5	5
Nail varnish remover	5	5	5
Natural fruit juices (Orange, Apple, Lemon)	5	5	5
Shoe polish	5	4	4
Stain or paint removers based on organic solvents	5	5	5
Tea	5	5	5
Toothpaste	5	5	5
Water	5	5	5
Water colours - (Red, Orange, Yellow, Green, Blue, Purple, Pink, Brown, Black)	5	5	5
Wine vinegar	5	5	5
Yeast suspension in water	5	5	5

Rating after 24 hour exposure **(Tested to EN 438-2)**

Rating	
5	No visible change
4	Slight change of gloss and/or colour only visible at certain viewing angles
3	Moderate marked change of gloss and/or colour
2	Marked change of gloss and/or colour
1	Surface distortion and/or blistering

Important Information

Note	Details
(W) ONLY use for internal/alfresco applications	Claims arising from non-internal applications are not covered under warranty
(W) ONLY use compact laminate sheets within 12 months of purchase	Claims arising from sheets stored for longer than 12 months where storage/ environmental conditions cannot be maintained are not covered under warranty.
(W) ALWAYS condition of panels prior to fabrication and installation	Claims attributable to failure to adhere to conditioning guidelines are not covered under warranty.
(W) DO NOT bond directly to plaster, plasterboard, masonry or concrete	Claims arising from bonding to non-recommended surfaces resulting in undulations telegraphing to the decorative surface or poor bonding, are not covered under warranty
(W) DO NOT use in installations where a Group 1 or 2 fire resistant product is required	

(W) Denotes specific warranty conditions apply.

Warranty Document	To view the latest Warranty Document for this product, please visit www.laminex.com.au.
Care & Maintenance Document	To view the latest Care & Maintenance Document for this product, please visit www.laminex.com.au.
Safety Data Sheet	To view the latest Safety Data Sheet for this product, please visit www.laminex.com.au.

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