RESCO BioLab Medium grade

PRODUCT SPECIFICATION

Using a specialised Compact Laminate, Resco's BioLab is the perfect solution for medium grade laboratories.

It's exceptional finish is resistant to chemicals, water, stains, impact and heat (up to 180c), making it ideal for laboratory and commercial use.

Check our comprehensive test results in section 4 and speak to our team to ensure the right choice for your particular application.

For more information please discuss with our customer service team on 0800 800 950 or visit *www.resco.co.nz/biolab*

PRODUCT CHARACTERISTICS:	
Colours -	Grey (Stocked) and 15 other colours (lead time applies)
Thickness -	16mm
Chemical resistance is Double sided	
Core colour -	Black
Panel Dimensions -	3670 x 1850mm

Section 1: Product and Company Identification

Manufacturer:

Maica Laminates Sdn Bhd
5100, Lorong Mak Mandin 5
Mak Mandin Industrial Estate
13400 Butterworth, Penang, Malaysia.

New Zealand Panel Distributor and Processing:

Resco Ltd
12 Kahu Cres, Te Rapa Park
Hamilton
New Zealand
Tel: +64-7 850 1025
0800 800 950

PRODUCT DESCRIPTION:	
	Biolab conforms with the specifications as stated in the EN 438-4:2005.
	Biolab is a panel of thickness 2mm and greater.

Section 2: Inspection Requirement Specifications

GENERAL INSPECTION REQUIREMENTS:			
Viewing distance	Approximately 150cm.		
Light conditions	Intensity 800 - 1000 lux over the whole area.		
Light type	Overhead white fluorescent lights, of colour temperature approximately 5000 K.		
INSPECTION REQUIREMENTS OF COLOUR, PATTERN AND SURFACE FINISH:			
Colour and Pattern	When inspected in daylight or D65 standard illuminant, and under tungsten illuminant, there shall be no significant difference between the corresponding colour or pattern reference sample held by the supplier and the specimen under test.		
Surface Finish	When inspected at different viewing angles, there shall be no significant difference between corresponding surface-finish reference sample held by the supplier and the specimen under test.		
VISUAL INSPECTION:			
Dirt, spots and similar surface defects	Max. 1 mm^2/m^2 and is proportional to the sheet size. Total admissible area of contamination may be concentrated in one spot or dispersed over an unlimited amount of smaller defects.		
Fibres, hairs and scratches	Max. 10 mm/m^2 and proportional to the sheet size. Total admissible area of contamination may be concentrated in one spot or dispersed over an unlimited amount of smaller defects		
Edge quality: chipping	Max. 3mm / side		
DIMENSIONAL TOLERANCES:			
Property	Test method (EN 438-2:2005, clause no.)	Unit	Values
Thickness	5	mm (max.)	12.0 ≤ t < 16.0mm : ± 0.60 mm 16.0 ≤ t < 20.0mm : ± 0.70 mm (t = nominal thickness)
Flatness a)	9	mm/m (max.)	2.0 ≤ t < 6.0 mm :8.0 mm/m 6.0 ≤ t < 10.0 mm :5.0 mm/m 10.0 mm ≤ t :3.0 mm/m (t = nominal thickness)
Length and width b)	6	mm	- 0 / + 10 mm
Straightness of edges b)	7	mm/m (max.)	1.5 mm/m
Squareness b)	8	mm/m (max.)	1.5 mm/m
a)	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.		
b)	Tolerances for cut-to-size panels shall be agreed between supplier and customer.		

Section 3: Alphabetical Classification System

First letter	C (Compact Grade)
Second letter	G (General purpose)
Third letter	S (Standard Grade)

Section 4: BioLab General Requirement

GENERAL SPECIFICATIONS:				
Property	Test method (EN 438-2: 2005, clause no.)	Property or attribute	Unit (min. or max.)	Values
Resistance to Surface Wear	10	Wear Resistance	Revolutions (min.) Initial point Wear value	 150 300
Resistance to Impact by Large Diameter Ball	21	Drop Height a)	mm (min.) 2≤ t < 6 6 ≤ t (t = nominal thickness)	 1400 1800
Resistance to Scratching	25	Force	Rating (min.) Textured finishes	3
Resistance to Dry Heat (180 °C)	16	Appearance	Rating (min.) Textured finishes	4
Resistance to Wet Heat (100°C)	EN12721	Appearance	Rating (min.) Textured finishes	4
Resistance to Immersion in Boiling Water	12	Mass increase Thickness increase Appearance	%(max.) 2mm≤t<5mm t≥5mm %(max.) 2mm≤t<5mm t≥5mm (t= nominal thickness) Rating (min.) Textured finishes	 5.0 2.0 6.0 2.0 4
Dimensional Stability at Elevated Temperature	17	Cumulative Dimensional Change	% (max) 2mm≤t<5mm L[b]) 2mm≤t<5mm T [c]) t≥5mm L t≥5mm T (t= nominal thickness)	 .40 .80 .30 .60
Resistance to Staining	26	Appearance	Rating (min.) Groups 1 & 2 Group 3	 5 4
Lightfastness (Xenon Arc)	27	Contrast	Grey scale rating	4 to 5
Resistance to Water Vapor	14	Appearance	Rating (min.) Textured finishes	4
Resistance to Cigarette Burns	30	Appearance	Rating (min.)	3
Resistance to Crazing	24	Appearance	Grade (min.)	4
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
Density	EN ISO 1183	Density	Kg/ m³ (min.)	1350
a)	When tested at the specified drop height, the diameter of indentation shall not exceed 10mm			
b)	L = in the longitudinal (or machine) direction of the fibrous sheet material (normally the direction of the longest dimension of the laminate).			
c)	T = in the cross-longitudinal (cross-machine) direction of the fibrous sheet material (at right angles to direction L).			

Section 5: Chemical Resistance

TEST METHOD:

The test was conducted by applying 2 or 3 drops of each reagent on the specimen surface. The reagent shall be at room temperature. Cover the reagent with a glass cover.
After a period of testing contact time under room temperature, the glass cover was removed. The reagent was rinsed off with water. Then the specimen surface was inspected and evaluated from various angles at a distance of 400mm.

RATING

No effect: No visible change of colour/ corrosion/ damage on surface
Excellent: Very slight change of colour, only visible at certain viewing angles
Good: Slightly change of colour on surface
Fair: Moderate change of colour on surface
Failure: Corrosion/ damage on surface

Group	%	No Effect	Excellent	Good	Fair	Failure
24-hour Contact Time						
Acetone	-	■				
Alcohol (Buthanol)	-	■				
Ammonia	25	■				
Ammonium Chloride	10	■				
Ammonium Thiocyanate	41	■				
Ammonium Sulphate	33	■				
Amyl Acetate	-	■				
Methyl Ethyl Ketone	100	■				
Benzene	-	■				
Dicholoromethane	99	■				
n-Buthyl Acetate	-	■				
Cadmium Sulphate Hydrate (Saturated)	-	■				
Lead Acetate Trihydrate	42	■				
Lead Nitrate (Saturated)	-	■				
Trisodium Phosphate	10	■				
Magnesium Chloride (Saturated)	-	■				
Magnesium Sulphate Heptahydrate	43	■				
Methanol	-	■				
Potassium Bromate (Saturated)	-	■				
Potassium Bromide	30	■				
Potassium Chloride (Saturated)	-	■				
Potassium Hydroxide	49		■			
Sodium Acetate	24	■				
Potassium Sulphate (Saturated)	-	■				
Isopropanol	-		■			
Sodium Acetate (Saturated)	-	■				
Calcium Chloride Dihydrate	41	■				
Chloral Hydrate	54	■				
Calcium Hydroxide (Saturated)	-	■				
Chloroform	99.5	■				
Copper Sulphate	10	■				
Ethanol	-	■				

Group	%	No Effect	Excellent	Good	Fair	Failure
Diethyl Ether	-	■				
Ethyl Acetate	-	■				
Glycerine	-	■				
Sodium Carbonate (Saturated)	-	■				
Sodium Chloride (Saturated)	-	■				
Sodium Nitrate (Saturated)	-	■				
Starch Soluble (Saturated)	-	■				
Thymol (Saturated)	-	■				
Toulene	99	■				
Tetrachloromethylene	99	■				
Xylene	-	■				
Zinc Chloride (Saturated)	-	■				
Zinc Sulphate Heptahydrate	33.66	■				
30 Mins Contact Time						
Hydrofluoric Acid	15		■			
Sulfuric Acid	60			■		
Nitric Acid	60		■			
Acetic Acid	100	■				
Boric Acid (Saturated)	-	■				
Citric Acid	30	■				
Oxalic Acid (Saturated)	-	■				
15 Mins Contact Time						
Aluminium Chloride (Saturated)	-	■				
Hydrogen Peroxide	30	■				
Methylene Blue (Saturated)	-	■				
Potassium Dichromate	-	■				
Potassium Iodide (Saturated)	-	■				
Potassium Permanganate (Saturated)	-	■				
Sodium Thiosulphate (Saturated)	-	■				
Potassium Nitrate (Saturated)	-	■				
Sodium Sulphite (Saturated)	-	■				
Sodium Hydroxide	49	■				
Silver Nitrate	5			■		