

SUNFLOWER LAMINATES Technical Data Sheet



Product: High Pressure Laminate
Size: 1220×2440mm, 1600×3660mm
Thickness: 0.7~1.0mm

Antibacterial Performance (Tested to JIS Z 2801: 2010)

Issued Date: 2 March, 2020

Item	Results
Enterococcus faecalis BCRC 10066	2.9
Bacillus subtilis BCRC10447	2.7

Notes: "Antimicrobial efficacy: The value of antimicrobial activity obtained by the testing methods of this standard shall not be less than 2.0 for the antimicrobial efficacy of antimicrobial products. Values of over 2.0 may be applicable subject to the agreement between parties concerned with delivery. " (JIS Z 2801: 2010 (amd 1:2012) Antimicrobial products-Test for antimicrobial activity and efficacy)"

Antifungal Performance (Tested to ASTM G21)

Issued Date: 5 July, 2021

Item	Results
Penicillium funiculosum BCRC 30438	0
Aspergillus brasiliensis BCRC 31512	0
Chaetomium globosum BCRC 31605	0
Trichoderma virens BCRC 31613	0
Aureobasidium pullulans BCRC 32364	0
Enterococcus faecalis BCRC 10066	0
Bacillus subtilis BCRC10447	0

The fungus results are usually determined and recorded as a growth rating:

"0" is no growth

"1" is <10% observed growth

"2" is 10 to 30% or 100% cobwebby growth (white growth) observed growth

"3" is 30 to 60% observed growth

"4" is greater than 60% observed growth

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Chemical Substances Performance (Tested to Green Label)

Issued Date: 6 Dec, 1993

Parameter	Test Method	Unit	Result	RPL	SGLS-042 Criteria	Justification	
Hazardous Substances for layers made of paper:							
I) PBBs & PBDEs*	GCMS	%	N.D.	0.01	N.D.	Pass	
II) Short Chain Chlorinated Paraffins (C10-13) with 50% or more Chlorine	GCMS	%	N.D.	0.01	N.D.	Pass	
III) Azo Dyes*	GCMS	%	N.D.	0.01	N.D.	Pass	
IV) Colorants	EPA 3052: Microwave acid digestion EPA 6010B: ICP		N.D.	0.01	N.D.	Pass	
a) Mercury (Hg)							
b) Lead (Pb)							
c) Cadmium (Cd)							
d) Hexavalent Chromium	UV-VIS	%	N.D.	0.01	N.D.	Pass	
Hazardous Substances for layers made of paper:							
I) Glyoxal*	GCMS	%	N.D.	0.01	N.D.	Pass	
II) Formaldehyde*	HPLC	%	N.D.	0.01	N.D.	Pass	
III) Heavy Metals:	EPA 3052: Microwave acid digestion EPA 6010B: ICP		N.D.	10	≤ 60	Pass	
a) Lead (Pb)							
b) Arsenic (As)							≤ 25
c) Antimony (Sb)							≤ 60
d) Barium (Ba)							≤ 500
e) Cadmium (Cd)							≤ 75
f) Chromium (Cr)							≤ 60
g) Cobalt (Co)							NA
h) Copper (Cu)							NA
i) Mercury (Hg)							≤ 60
j) Nickle (Ni)							NA
k) Selenium (Se)							≤ 500
l) Tin (Sn)							NA
m) Zinc (Zn)							NA
n) Hexavalent Chromium	UV-VIS	%	N.D.	0.01	NA	NA	
Emissions:							
VOCs (After 7 Days)	ASTM D5116	mg/m ² /hr	N.D.	0.01	≤ 0.40	Pass	
Toluene (After 7 Days)		mg/m ² /hr	N.D.	0.01	≤ 0.08	Pass	
Formaldehyde (After 7 Days)		mg/m ² /hr	N.D.	0.02	≤ 0.05	Pass	

Notes: N.D. - Not Detected (< Reporting Limit)

*Tests were performed in conjunction with Marchwood Scientific Services Ltd.

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NEMA LD3-1991 Test

Issued Date: 29 Dec, 2014

NEMA LD3-1991 Test	Test Laminate	GP-38 minimum required	Pass / Fail
3.1 Wear Resistance	505	400	Pass
3.2 Scuff Resistance	NE	NE	Pass
3.3 Ball Impact	46"	35"	Pass
3.4 Dimension Change Machine Direction	0.3	0.6	Pass
Cross Direction	0.9	1.0	Pass
3.5 Boiling Water Resistance	NE	NE	Pass
3.6 High Temperature Resistance	NE	SL	Pass
3.7 Radiant Heat Resistance	221	100	Pass
3.8 Conductive Heat Resistance	NE	NE	Pass
3.9 Stain Resistance Reagents 1-23	NE	NE	Pass
Reagents 24-29	NE	M	Pass
3.10 Light Resistance	SL	SL	Pass
3.12 Cleanability of Surface	NE	SL	Pass
3.13 Surface Finish		textured, low gloss	
Machine Direction	13.0	1-20	textured, low gloss
Cross Direction	13.0	1-20	textured, low gloss
3.16 Dart Impact Resistance	17"	—	—
Thickness	0.040	.033-.043	Pass

NE = No Effect

SL = Slight Effect

M = Moderate Effect

S = Severe Effect

3.1: Average corrected Initial Point = 124

Average corrected Final Point = 886

IMPORTANT

These tests were conducted according to the procedures described in NEMA standards LD3-1991. The test procedures and standards were designed for high pressure laminates, and their use with other products may produce misleading or irrelevant results. Tests were done through third party of 'North Carolina State University Wood Products Laboratory'. The name of University here is not to be used in any types advertising or promotional efforts.

Other Certifications:

ISO 9001:2015

BS EN 438-1995

Marine Equipment Directive 2014/90/EU - Marine & Offshore

Sunflower Laminates

Made in Taiwan

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