



Metal Works

A Division of قسم من

الحلول الميكانيكية والتقنية ش.م.م

MECHANICAL & TECHNICAL SOLUTIONS LLC

QUALITY[®]

you can **TRUST**



Omani



Toilet Cubicles & Lockers

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Hygiene is our Ethic

Microbes are present on all surfaces. M&T provides you with the latest in antimicrobial technology to protect you from almost all forms of harmful bacteria, viruses and fungi.

Advantages of Solid Laminates:

- Exceptional self-supporting properties
- Greater dimensional stability and flatness
- Excellent hygienic properties
- Resistant to abrasion, water and fire
- Resistant to chemicals and organic solvents
- Quick and simple assembly without the need for edging or adhesives

Chemical resistant compact laminates are designed for use in the most demanding work environments, such as clinics, laboratories, educational institutions, photographic dark rooms and other areas that are prone to abrasive or corrosive chemical exposure. The panels are treated with an advanced formulation that provides substantial resistance to chemicals, abrasive materials and other harsh substances.

Toilet Partition Accessories



- ① Adjustable Footing
- ② Life Hinge
- ③ Flat Hinge
- ④ Handle
- ⑤ Door Lock
- ⑥ Clothes Hook
- ⑦ Corner Fastener
- ⑧ Head Rail 900-1000 mm

- ① Side Profile
- ② End Panel Elbow Profile
- ③ Middle Profile
- ④ U Profile
- ⑤ Overhead 900-1000 mm
- ⑥ Side Profile Pedestal
- ⑦ Middle Profile Pedestal
- ⑧ Hinge Gasket
- ⑨ Hinge
- ⑩ Door Lock
- ⑪ Lock Catch
- ⑫ Headrail Gasket



Features:

- Strong resistance to impact
- Strong resistant to abrasions, stains and heat
- Non - toxic
- Impervious to moisture and steam
- Self supporting and long term stability
- Various colors, finishes and patterns

**Technical Data Sheet for Compact General Purpose & Flame-Retardant Grade
Laminates-12.0 mm thickness**

S. NO.	PROPERTIES	Unit	TEST METHOD AS PER EN 438 Part 2 & 4 : 2016	SPECIFIED VALUES	TYPICAL GREENLAM RESULTS	SPECIFIED VALUES	TYPICAL GREENLAM RESULTS
1	CLASSIFICATION		EN 438-4-4	COMPACT GENERAL PURPOSE STANDARD, CGS		COMPACT GENERAL PURPOSE FLAME-RETARDANT, CGF	
2	Thickness & Maximum variation	mm	EN 438-2-5	12.0 ± 0.60	Complies	12.0 ± 0.60	Complies
3	Length & Width	mm	EN 438-2-6	+10mm /-0mm	Complies	+10mm /-0mm	Complies
4	Resistance to Dry Heat at 160° C	Rating	EN 438-2-16	4 (min.)	5	4 (min.)	5
5	Resistance to Surface Wear, Initial point	Rev.	EN 438-2-10	150 (min.)	Complies	150 (min.)	Complies
6	Resistance to Water Vapor, Appearance	Rating	EN 438-2-14	4 (min.)	5	4 (min.)	5
7	Resistance to Immersion in Boiling Water (2 hours)		EN 438-2-12				
	a) Mass Increase	%		2.0 (max.)	0.52	3.0 (max.)	1.04
	b) Thickness	%		2.0 (max.)	0.88	6.0 (max.)	1.84
	c) Surface appearance	Rating		4 (min.)	5	4 (min.)	5
d) Edge appearance	3 (min.)		4	3 (min.)	4		
8	Dimensional Stability at Elevated Temperature		EN 438-2-17				
	a) Longitudinal	%		0.30(max.)	0.09	0.30(max.)	0.17
	b) Transverse	%	0.60 (max)	0.16	0.60 (max)	0.28	
9	Resistance to Impact by Large Diameter Ball		EN 438-2-21				
	a) Drop Height	mm		1800	2000	1800	2000
	b) Diameter of Indentation	mm	10 (max)	7	10 (max)	7	
10	Resistance to Scratching, Force	Rating	EN 438-2-25	3 (min.)	4	3 (min.)	4
11	Resistance to staining	Group 1 & 2	EN 438-2-26	5	5	5	5
		Group 3		Rating	4	≥ 4	4
12	Resistance to Wet heat (100°C), Appearance	Rating	EN 438-2-18	4 (min.)	5	4 (min.)	5
13	Resistance to Crazeing, Appearance	Rating	EN 438-2-24	4 (min.)	5	4 (min.)	5
14	Flexural Modulus	Mpa	EN ISO 178:2003	9000 (min.)	11000	9000 (min.)	10700
15	Flexural Strength	Mpa	EN ISO 178:2003	80 (min.)	100	80 (min.)	100
16	Tensile Strength	Mpa	EN ISO 527-2:1996	60 (min.)	70	60 (min.)	70
17	Light Fastness (Xenon Arc), Grey Scale	Rating	EN 438-2-27	4 to 5	Complies	4 to 5	Complies
18	Density	g/cm ³	EN ISO 1183-1 :2004	1.35	1.38	1.35	1.38
19	Reaction to Fire (Tested according to EN 13823:2010 & EN 11925-2 :2010)*	Euro class	EN 438-7 & EN 13501-1: 2007+ A1:2009	D-s2,d0 or better	C-S2, d0 Superior, better	B-s2,d0	B-S1, d0, Superior, better



**Technical Data Sheet for Compact General Purpose & Flame-Retardant Grade
Laminates-18.0 mm thickness**



S. NO.	PROPERTIES	Unit	TEST METHOD AS PER EN 438 Part 2 & 4 : 2016	SPECIFIED VALUES	TYPICAL GREENLAM RESULTS	SPECIFIED VALUES	TYPICAL GREENLAM RESULTS
1	CLASSIFICATION		EN 438-4-4	COMPACT GENERAL PURPOSE STANDARD, CGS		COMPACT GENERAL PURPOSE FLAME-RETARDANT, CGF	
2	Thickness & Maximum variation	mm	EN 438-2-5	18.0 ± 0.70	Complies	18.0 ± 0.70	Complies
3	Length & Width	mm	EN 438-2-6	+10mm /-0mm	Complies	+10mm /-0mm	Complies
4	Resistance to Dry Heat at 160° C	Rating	EN 438-2-16	4 (min.)	5	4 (min.)	5
5	Resistance to Surface Wear, Initial point	Rev.	EN 438-2-10	150 (min.)	Complies	150 (min.)	Complies
6	Resistance to Water Vapor, Appearance	Rating	EN 438-2-14	4 (min.)	5	4 (min.)	5
7	Resistance to Immersion in Boiling Water (2 hours)		EN 438-2-12				
	a) Mass Increase	%		2.0 (max.)	0.35	3.0 (max.)	0.75
	b) Thickness	%		2.0 (max.)	0.72	6.0 (max.)	1.42
	c) Surface appearance	Rating		4 (min.)	5	4 (min.)	5
d) Edge appearance	3 (min.)		4	3 (min.)	4		
8	Dimensional Stability at Elevated Temperature		EN 438-2-17				
	a) Longitudinal	%		0.30(max.)	0.04	0.30(max.)	0.08
	b) Transverse	%	0.60 (max)	0.10	0.60 (max)	0.20	
9	Resistance to Impact by Large Diameter Ball		EN 438-2-21				
	a) Drop Height	mm		1800	2000	1800	2000
	b) Diameter of Indentation	mm	10 (max)	7	10 (max)	7	
10	Resistance to Scratching, Force	Rating	EN 438-2-25	3 (min.)	4	3 (min.)	4
11	Resistance to staining	Group 1 & 2	EN 438-2-26	5	5	5	5
		Group 3		Rating	4	≥ 4	4
12	Resistance to Wet heat (100°C), Appearance	Rating	EN 438-2-18	4 (min.)	5	4 (min.)	5
13	Resistance to Crazeing, Appearance	Rating	EN 438-2-24	4 (min.)	5	4 (min.)	5
14	Flexural Modulus	Mpa	EN ISO 178:2003	9000 (min.)	11000	9000 (min.)	10700
15	Flexural Strength	Mpa	EN ISO 178:2003	80 (min.)	100	80 (min.)	100
16	Tensile Strength	Mpa	EN ISO 527-2:1996	60 (min.)	70	60 (min.)	70
17	Light Fastness (Xenon Arc), Grey Scale	Rating	EN 438-2-27	4 to 5	Complies	4 to 5	Complies
18	Density	g/cm ³	EN ISO 1183-1 :2004	1.35	1.38	1.35	1.38
19	Reaction to Fire (Tested according to EN 13823:2010 & EN 11925-2 :2010)*	Euro class	EN 438-7 & EN 13501-1: 2007+ A1:2009	D-s2,d0 or better	C-S2, d0 Superior, better	B-s2,d0	B-S1, d0, Superior, better

Report Reference: M&T Oman - 0001a
Client: Mechanical & Technical Solutions, Oman
Date: 06/08/2018
Material tested: White coated (RAL9010) steel door with ST2019

Test Laboratory: Anti-Microbial Test Division, Kyoto Biseibutsu Kenkyusyo
 Yamashina-ku, Kyoto 607-8482, Japan

Evaluation of the antimicrobial performance of samples containing antimicrobial additives. All testing is conducted by an independent laboratory using the ISO 22196 / JIS Z 2801:2000 test method.

Introduction

This report details the analysis carried out on the test samples, including an overview of the test method, the test results, an interpretation of those results and copies of the associated laboratory certificates.

Test samples

Where possible, all test materials are taken from samples of the actual product. Samples typically measure 50mm x 50mm, as specified by the JIS Z 2801:2000 method, although where this is impractical it is permissible to use smaller samples with the method being modified accordingly.

Test method

The samples were tested according to the JIS Z 2801:2000 method, briefly summarised as follows:

Each test sample is inoculated with a suspension of the test organism (for example, MRSA). The inoculum is held in contact with the test sample using a sterile polyethylene film. All test samples are inoculated in triplicate, with an additional three replicates of the control.

The bacterial population on three control replicates is evaluated immediately following inoculation. This is assumed to be the initial population on all test samples (i.e. the population at zero hours).

The remaining samples are incubated for the test period (24 hours) at 35°C, at which time the bacterial population is evaluated.

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Safe Healthy Living Begins with GREENLAM®

Our entire range of laminates is incorporated with Safeguard™ Plus, a revolutionary technology that retards growth of nearly 99% of common bacteria. From hygiene-sensitive environments like laboratories and kindergartens to conventional spaces like bedrooms and offices, your health is always assured with Greenlam.



GREENGUARD Certification Program

GREENGUARD® laminates are classified under the Low Emitting Product category by the GREENGUARD standards, meaning that harmful pollutants in the air are suppressed to the lowest levels. This is an assurance that our products are designed for use in office environments and other indoor spaces, and promote a healthier environment in these areas.



GREENGUARD Gold Certification

This certification, with a stricter criteria, means that GREENLAM® products are suitable for use in environments where children spend significant periods of time, including schools, daycares and healthcare facilities.

To know more about the GREENGUARD certifications, visit www.greenguard.org



GREEN LABEL Certification

042 - 003 In 2010, GREENLAM® was awarded the GreenLabel Singapore by the Singapore Environment Council. GREENLAM® is the first brand in Asia to have received the GreenLabel certification on its entire range of products. The GreenLabel certification is awarded based on a set of strict qualification criteria. It further endorses our efforts to be a green brand that contributes to a healthy environment for work, play and living.



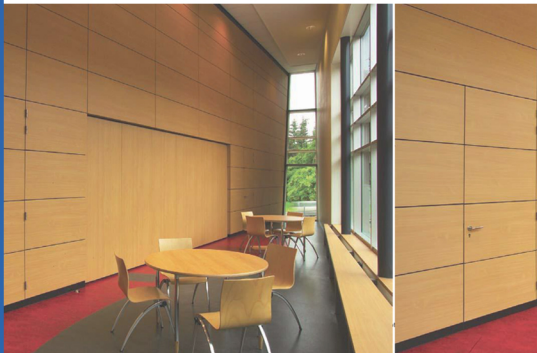
Greenlam Product has been awarded with CE certification which is given to those manufacturers who declares that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation, in practice by many Product Directives. CE Marking on a product indicates to governmental officials that the product may be legally placed on the market in their country.



The FSC certification is considered the "gold standard" designation for wood harvested from forests that are responsibly managed, socially beneficial, environmentally conscious and economically viable. If a product, like a piece of tropical hardwood furniture, is labeled as "FSC Certified," it means that the wood used in the piece and manufacturer that made it met the requirements of the forest stewardship Council. In our case we can provide FSC grade laminate for any project which wants to earn LEED points for Green building certifications.



All Greenlam Laminates are certified by prestigious American body NSF International, making it the safest laminates for human health, even it can be used in direct contact with food.





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