

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

Materialab

Client Ref. : --
Report No. : 140781ST140145

Page 1 of 5

REPORT ON RESISTANCE TO IMPACT BY SMALL DIAMETER BALL OF LAMINATE SHEET**Information Supplied by Client**

Client : SUNFLOWER INDUSTRY (FAR EAST) LTD.
Project : Testing of laminate panel
Sample Description : High Pressure Plastic Laminate Panel


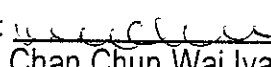
Laboratory Information

Lab. Sample I.D. : ST140145/1-5
Date Received : 15 March 2014
Date Tested : 24 March 2014
Date Test Completed : 25 March 2014
Test Method : BS EN 438-2 : 2005, Clause 20

Test Results

Location	Maximum Spring Force (N)	Observation
ST140145/1	50	No cracking
ST140145/2	45	No cracking
ST140145/3	45	No cracking
ST140145/4	55	No cracking
ST140145/5	50	No cracking

Remark : 1.) The test results relate only to the sample tested.
2.) The test sample is shown in the photograph on page 2 of this report.

Checked By :  Date : 14/3/2014 Certified By :  Date : 14.3.2014
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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Page 2 of 5

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Test Configuration
Sample I.D.: ST140145

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Page 3 of 5

REPORT ON RESISTANCE TO CRACKING UNDER STRESS OF LAMINATE**Information Supplied by Client**

Client : SUNFLOWER INDUSTRY (FAR EAST) LTD.
Project : Testing of laminate panel
Sample Description : High Pressure Plastic Laminate Panel

Laboratory Information

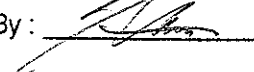

Lab. Sample I.D. : ST140145/6-9
Date Received : 15 March 2014
Date Test Started : 21 March 2014
Date Test Completed : 27 March 2014
Test Method : BS EN 438-2 : 2005, Clause 23

Test Results

Lab. Sample I.D.	Observation	Result Rating
ST140145/6	No evidence of cracking	5
ST140145/7	No evidence of cracking	5
ST140145/8	No evidence of cracking	5
ST140145/9	No evidence of cracking	5

Rating Scale : Rating 1 : Specimen broken into two pieces.
Rating 2 : A crack visible with normal vision (corrected if necessary) from the edge of the hole, extending to one edge of the specimen such that the specimen is not broken into two pieces.
Rating 3 : Cracks visible with normal vision (corrected if necessary) from the edge of the hole, but not extending to either edge of the specimen.
Rating 4 : Hairline cracks only visible under x 6 magnification.
Rating 5 : No evidence of cracking.

Remark : The test results relate only to the sample tested.

Checked By :  Date : 11/4/2014 Certified By :  Date : 11/4/2014
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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Page 4 of 5

REPORT ON RESISTANCE TO SURFACE WEAR FOR HIGH-PRESSURE DECORATIVE LAMINATES**Information Supplied by Client**

Client : SUNFLOWER INDUSTRY (FAR EAST) LTD.
Project : Testing of laminate panel
Sample Description : High Pressure Plastic Laminate Panel

Laboratory Information



Lab. Sample I.D. : SU140011/1-3
Date Received : 15 March 2014
Date Tested : 21 March 2014
Date Test Completed : 26 March 2014
Test Method : BS EN 438-2 : 2005, Clause 10

Test Results

Lab. Sample I.D.	Initial wear point (IP) (Revolutions)	Average (Revolutions)	Final wear point (FP) (Revolutions)	Wear resistance (Revolutions)
SU140011/1	425	433	900	666
SU140011/2	425		875	654
SU140011/3	450		875	654
			Average	650

Remarks :

1.) The test results relate only to the samples tested.

Checked by :  Date : 1/4/2014 Certified by :  Date : 1.4.2014
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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Report No : 140781ST140145

Page 5 of 5

REPORT ON RESISTANCE TO SCRATCHING FOR HIGH-PRESSURE DECORATIVE LAMINATES

Information Supplied by Client

Client : SUNFLOWER INDUSTRY (FAR EAST) LTD.
Project : Testing of laminate panel
Sample Description : High Pressure Plastic Laminate Panel

Laboratory Information

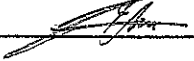
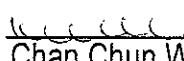
Lab. Sample I.D. : SU140011/4
Date Received : 15 March 2014
Date Tested : 21 March 2014
Date Test Completed : 26 March 2014
Test Method : BS EN 438-2 : 2005, Clause 25

Test Results

Load values	Observation	Specification of BS EN 438-2 : 2005, Clause 25		
		-	Discontinuous scratches, or faint superficial marks, or no visible marks.	≥90% continuous double circle of scratch marks clearly visible.
		Rating 1	-	1N
6N	≥90% continuous double circle of scratch marks clearly visible.	Rating 2	1N	2N
4N	≥90% continuous double circle of scratch marks clearly visible.	Rating 3	2N	4N
2N	Faint superficial marks	Rating 4	4N	6N
1N	No visible marks	Rating 5	6N	>6N

Remarks :

- 1.) The test results relate only to the samples tested.
- 2.) Resistance of scratching of sample **comply with** the requirement of **Rating 3** of BS EN 438-2 : 2005, Clause 25

Checked By :  Date : 1/4/2014 Certified By :  Date : 1.4.2014
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

**** End of Report ****