**SUMMARY REPORT**

**Information Supplied by Client**
- Client: GREENLAM ASIA PACIFIC PTE LTD.
- Project: Testing of Laminate
- Sample Description: Laminate

**Laboratory Information**
- Lab. Sample I.D.: ST171137/1-33, 34a-34e
- Sample Received: 21 November 2017, 22 November 2017, 07 December 2017
- Date Test Started: 07 December 2017
- Date Test Completed: 16 December 2017

<table>
<thead>
<tr>
<th>Test Report No.</th>
<th>Test Item</th>
<th>Test Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>174732ST171137</td>
<td>Determination of thickness</td>
<td>BS EN 438-2: 2016 Clause 5 and BS EN 438-3: 2016</td>
<td>Average Thickness: 1.03 mm</td>
</tr>
</tbody>
</table>
                        |                                                            |                                                 | b) Thickness increase: 10.09%  
                        |                                                            |                                                 | c) Change in appearance:  
                        |                                                            |                                                 | Rating: No visible change |
| 174732ST171137(3)| Substrate protection against water vapour              | BS EN 438-2: 2016 Clause 13                     | Difference in thickness:  
                        |                                                            |                                                 | Average: 0.035 mm |
| 174732ST171137(4)| Resistance to water vapour                             | BS EN 438-2: 2016 Clause 14 and BS EN 438-3: 2016 | Rating 5: No visible change                                           |
| 174732ST171137(5)| Resistance to dry heat                                  | BS EN 438-2: 2016 Clause 16 and BS EN 438-3: 2016 | Rating 5: No change                                                    |
| 174732ST171137(6)| Determination of dimensional stability at elevated temperature | BS EN 438-2: 2016 Clause 17 and BS EN 438-3: 2016 | a) High-Humidity Test:  
                        |                                                            |                                                 | 0.22% (parallel direction)  
                        |                                                            |                                                 | 0.16% (right angle direction)  
                        |                                                            |                                                 | b) Dry-Heat Test:  
                        |                                                            |                                                 | -0.27% (parallel direction)  
                        |                                                            |                                                 | -0.32% (right angle direction)  |
| 174732ST171137(7)| Resistance to impact by small-diameter ball            | BS EN 438-2: 2016 Clause 20 and BS EN 438-3: 2016 | No visible damage at 90N                                               |
| 174732ST171137(8)| Resistance to impact by large-diameter ball             | BS EN 438-2: 2016 Clause 21 and BS EN 438-3: 2016 | No cracking at 2000 mm                                                 |
| 174732ST171137(9)| Resistance to cracking under stress (Laminates <=2mm Thick) | BS EN 438-2: 2016 Clause 23 and BS EN 438-3: 2016 | No evidence of cracking, Rating 5                                      |
                        |                                                            |                                                 | b) Coffee: Rating 5: No change  
                        |                                                            |                                                 | c) Shoes Polish: Rating 5: No change  
                        |                                                            |                                                 | d) Sodium Hydroxide (25% solution): Rating 5: No change  
                        |                                                            |                                                 | e) Hydrogen Peroxide (30% solution): Rating 5: No change |

Checked by: ___________________ Date: 02 JAN 2019 Certified by: ___________________ Date: 02 JAN 2019

Chan Chun Wai
Manager (Product Testing Laboratory)

**End of Report**

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REPORT ON DETERMINATION OF THICKNESS OF LAMINATE

Information Supplied by Client

Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information

Lab. Sample I.D. : ST171137/1
Date Received : 22 November 2017
Date Tested : 07 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab Sample I.D.</th>
<th>Measurement of Thickness (mm)</th>
<th>Average Thickness (mm)</th>
<th>Max. Variation (mm)</th>
<th>Requirement of Variation (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a b c d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST171137/1</td>
<td>1.01 1.05 1.03 1.02</td>
<td>1.03</td>
<td>0.04</td>
<td>±0.15</td>
</tr>
</tbody>
</table>

Remarks :
1.) The test results relate only to the samples tested.
2.) The test results comply with the requirement of BS EN 438-3 : 2016, table 4.

Checked by : [Signature] Date : 02 JAN 2019
Certified by : [Signature] Date : 02 JAN 2019

Manager (Product Testing Laboratory)
**REPORT ON RESISTANCE TO SURFACE WEAR OF LAMINATE**

**Information Supplied by Client**
- **Client**: GREENLAM ASIA PACIFIC PTE LTD.
- **Project**: Testing of Laminate
- **Sample Description**: Laminate

**Laboratory Information**
- **Lab. Sample I.D.**: ST171137/2-4
- **Date Received**: 22 November 2017
- **Date Tested**: 07 December 2017

**Test Results**

<table>
<thead>
<tr>
<th>Lab. Sample I.D.</th>
<th>Test Loads (N)</th>
<th>Revolutions</th>
<th>Observation</th>
<th>Result</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/2</td>
<td>5.4</td>
<td>500</td>
<td>No recognisable wear-through of the plain colour was found and no sub-layer was exposed</td>
<td>Satisfactory</td>
<td>Laminate grade (HGS) Revolution, min. 150</td>
</tr>
<tr>
<td>ST171137/3</td>
<td>5.4</td>
<td>500</td>
<td></td>
<td>Satisfactory</td>
<td></td>
</tr>
<tr>
<td>ST171137/4</td>
<td>5.4</td>
<td>500</td>
<td></td>
<td>Satisfactory</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**
1.) The test results relate only to the samples tested.
2.) The samples after test are shown in the photograph on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3:2016, table 5.

**Checked by**: [Signature]  Date: 02 JAN 2019  
**Certified by**: [Signature]  Date: 02 JAN 2019

Chan Chun Wai Ivan  
Manager (Product Testing Laboratory)

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Sample After Test
Sample I.D.: ST171137/2-4

**End of Report**
**REPORT ON RESISTANCE TO IMMERSION IN BOILING WATER OF LAMINATE**

**Information Supplied by Client**
- **Client**: GREENLAM ASIA PACIFIC PTE LTD.
- **Project**: Testing of Laminate
- **Sample Description**: Laminate

**Laboratory Information**
- **Lab. Sample I.D.**: ST171137/5-8
- **Date Received**: 22 November 2017
- **Date Tested**: 11 December 2017

**Test Results**

<table>
<thead>
<tr>
<th>Lab Sample I.D.</th>
<th>Weight Before Immersion (g)</th>
<th>Weight After Immersion (g)</th>
<th>Increase In Mass (%)</th>
<th>Result (Rating)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/5</td>
<td>4.026</td>
<td>4.271</td>
<td>6.09</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>ST171137/6</td>
<td>4.057</td>
<td>4.316</td>
<td>6.38</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>ST171137/7</td>
<td>4.008</td>
<td>4.266</td>
<td>6.44</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>ST171137/8</td>
<td>4.024</td>
<td>4.271</td>
<td>6.14</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td></td>
<td><strong>6.26</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Thickness of specimen (mm)**

<table>
<thead>
<tr>
<th>Lab Sample I.D.</th>
<th>Thickness of specimen (mm)</th>
<th>Increase in thickness (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before immersion</td>
<td>After Immersion</td>
</tr>
<tr>
<td>ST171137/5</td>
<td>1.02 1.02 1.02 1.02 1.11 1.10 1.11 1.12</td>
<td>8.82 7.84 8.82 9.80</td>
</tr>
<tr>
<td>ST171137/6</td>
<td>1.00 1.02 1.02 1.01 1.12 1.15 1.14 1.13</td>
<td>12.00 12.75 11.76 11.88</td>
</tr>
<tr>
<td>ST171137/7</td>
<td>1.02 1.03 1.01 1.02 1.12 1.11 1.11 1.12</td>
<td>9.80 7.77 9.90 9.80</td>
</tr>
<tr>
<td>ST171137/8</td>
<td>1.07 1.01 1.02 1.02 1.12 1.11 1.12 1.12</td>
<td>10.89 9.90 9.80 9.80</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Surface rating**
Rating 5: No visible change

**Edge rating**
Rating 5: No visible change

**Remarks**
1. The test results relate only to the samples tested.
2. The test results comply with the requirement of BS EN 438-3:2016, table 5.

**Checked by:**  
**Date:** 02 JAN 2019  
**Certified by:**  
**Date:** 02 JAN 2019

Chan Chun Wai Ivan  
Manager (Product Testing Laboratory)

**End of Report**

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REPORT ON SUBSTRATE PROTECTION AGAINST WATER VAPOUR OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/9-10
Date Received : 21 November 2017
Date Tested : 15 December 2017
Test Method : BS EN 438-2 : 2016 Clause 13

Test Results

<table>
<thead>
<tr>
<th>Lab.Sample I.D.</th>
<th>Thickness of circular groove before test (t1) mm</th>
<th>Thickness of circular groove after test (t2) mm</th>
<th>Difference in thickness (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/9</td>
<td>0.79</td>
<td>0.83</td>
<td>0.04</td>
</tr>
<tr>
<td>ST171137/10</td>
<td>0.78</td>
<td>0.81</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td></td>
<td>0.035</td>
</tr>
</tbody>
</table>

Remarks:
1.) The test results relate only to the samples tested.
2.) The samples after test are shown in the photograph on page 2 of this report.

Checked by: ___________________________ Date: 02 JAN 2019
Certified by: __________________________ Date: 02 JAN 2019

Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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Sample After Test
Sample I.D.: ST171137/9-10

**End of Report**
REPORT ON RESISTANCE TO WATER VAPOUR OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/11
Date Received : 07 December 2017
Date Tested : 11 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab.Sample I.D.</th>
<th>Observation</th>
<th>Results (Rating)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/11</td>
<td>No visible change</td>
<td>5</td>
<td>Laminate grade (HGS) Rating, min.4</td>
</tr>
</tbody>
</table>

Rating 5 : No visible change

Remarks :
1.) The test results relate only to the samples tested.
2.) The test configuration and the test samples are shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

Checked by : [Signature] Date : 02 JAN 2018
Certified by : [Signature] Date : 02 JAN 2018
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)
Test Configuration
Sample I.D.: ST171137/11

Test Sample
Sample I.D.: ST171137/11

**End of Report**
REPORT ON RESISTANCE TO DRY HEAT OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/12
Date Received : 07 December 2017
Date Tested : 11 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab. Sample I.D.</th>
<th>Observation</th>
<th>Results (Rating)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/12</td>
<td>No change</td>
<td>5</td>
<td>Laminate grade (HGS) Rating, min.4</td>
</tr>
</tbody>
</table>

Rating 5 : No change

Remarks:
1.) The test results relate only to the samples tested.
2.) The test configuration and the sample after test are shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

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Certified by: [Signature] Date: 02 JAN 2019
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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Test Configuration
Sample I.D.: ST171137/12

Sample After Test
Sample I.D.: ST171137/12

**End of Report**
REPORT ON DETERMINATION OF DIMENSIONAL STABILITY AT ELEVATED TEMPERATURE OF LAMINATE

Information Supplied by Client
Client: GREENLAM ASIA PACIFIC PTE LTD.
Project: Testing of Laminate
Sample Description: Laminate

Laboratory Information
Lab. Sample I.D.: ST171137/13-20
Date Received: 22 November 2017
Date Test Started: 12 December 2017
Date Test Completed: 16 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab Sample I.D.</th>
<th>Direction</th>
<th>Thickness (mm)</th>
<th>Measured Length (mm)</th>
<th>Change of measured length (%)</th>
<th>The Cumulative Dimensional Change (%)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Before condition</td>
<td>After condition</td>
<td></td>
<td>Parallel Direction</td>
<td>Right Angle Direction</td>
</tr>
<tr>
<td>ST171137/13</td>
<td>Parallel</td>
<td>0.97</td>
<td>202.15</td>
<td>202.66</td>
<td>0.25</td>
<td>0.49</td>
</tr>
<tr>
<td>ST171137/14</td>
<td>Parallel</td>
<td>0.97</td>
<td>202.88</td>
<td>203.24</td>
<td>0.18</td>
<td>0.22</td>
</tr>
<tr>
<td>ST171137/15</td>
<td>Right angle</td>
<td>0.98</td>
<td>201.63</td>
<td>201.94</td>
<td>0.15</td>
<td>0.16</td>
</tr>
<tr>
<td>ST171137/16</td>
<td>Right angle</td>
<td>0.97</td>
<td>201.79</td>
<td>202.12</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>0.97</td>
<td>202.09</td>
<td>202.32</td>
<td>0.16</td>
<td>0.16</td>
</tr>
</tbody>
</table>

Dry-Heat Test (70±/-2°C oven dry for 24 hours)

<table>
<thead>
<tr>
<th>Lab Sample I.D.</th>
<th>Direction</th>
<th>Thickness (mm)</th>
<th>Measured Length (mm)</th>
<th>Change of measured length (%)</th>
<th>The Cumulative Dimensional Change (%)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Before condition</td>
<td>After condition</td>
<td></td>
<td>Parallel Direction</td>
<td>Right Angle Direction</td>
</tr>
<tr>
<td>ST171137/17</td>
<td>Parallel</td>
<td>0.96</td>
<td>202.06</td>
<td>201.50</td>
<td>-0.28</td>
<td>0.49</td>
</tr>
<tr>
<td>ST171137/18</td>
<td>Parallel</td>
<td>0.97</td>
<td>202.02</td>
<td>201.52</td>
<td>-0.25</td>
<td>0.27</td>
</tr>
<tr>
<td>ST171137/19</td>
<td>Right angle</td>
<td>0.98</td>
<td>202.10</td>
<td>201.41</td>
<td>-0.34</td>
<td>-0.27</td>
</tr>
<tr>
<td>ST171137/20</td>
<td>Right angle</td>
<td>1</td>
<td>202.11</td>
<td>201.54</td>
<td>-0.30</td>
<td>-0.27</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>0.97</td>
<td>202.08</td>
<td>201.76</td>
<td>-0.26</td>
<td>-0.32</td>
</tr>
</tbody>
</table>

Remarks:
1.) The test results relate only to the samples tested.
2.) The test samples are shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

Checked by: [Signature] Date: 02 JAN 2019
Certified by: [Signature] Date: 02 JAN 2019

Manager (Product Testing Laboratory)
Test Sample
Sample I.D.: ST171137/13-16

Test Sample
Sample I.D.: ST171137/17-20

**End of Report**
REPORT ON RESISTANCE TO IMPACT BY SMALL- DIAMETER BALL OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/21-23
Date Received : 22 November 2017
Date Tested : 15 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab. Sample I.D.</th>
<th>Impact Resistance (N)</th>
<th>Observation</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/21</td>
<td>90</td>
<td>No visible damage</td>
<td>Laminate grade (HGS) min. 20N</td>
</tr>
<tr>
<td>ST171137/22</td>
<td>90</td>
<td>No visible damage</td>
<td></td>
</tr>
<tr>
<td>ST171137/23</td>
<td>90</td>
<td>No visible damage</td>
<td></td>
</tr>
</tbody>
</table>

Remarks :
1.) The test results relate only to the samples tested.
2.) The samples after test are shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

Checked by : [Signature] Date : 02 JAN 2019 Certified by : [Signature] Date : 02 JAN 2019
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)
Sample After Test
Sample I.D.: ST171137/21-22

Sample After Test
Sample I.D.: ST171137/23

**End of Report**
REPORT ON RESISTANCE TO IMPACT BY LARGE-DIAMETER BALL OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/24-28
Date Received : 22 November 2017
Date Tested : 15 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab. Sample I.D.</th>
<th>Observation</th>
<th>Impact Resistance (mm)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/24</td>
<td>No cracking</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>ST171137/25</td>
<td>No cracking</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>ST171137/26</td>
<td>No cracking</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>ST171137/27</td>
<td>No cracking</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>ST171137/28</td>
<td>No cracking</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>2000</td>
<td>Laminate grade (HGS) min. 800 mm</td>
</tr>
</tbody>
</table>

Remarks:
1.) The test results relate only to the samples tested.
2.) The test configuration and the samples after test shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

Checked by: [Signature] Date: 02 JAN 2019 Certified by: [Signature] Date: 02 JAN 2019
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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**End of Report**
REPORT ON RESISTANCE TO CRACKING UNDER STRESS (LAMINATES <=2MM THICK) OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/29-32
Date Received : 22 November 2017
Date Test Started : 12 December 2017
Date Test Completed : 15 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab. Sample I.D.</th>
<th>Test hours</th>
<th>Observation</th>
<th>Rating</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/29</td>
<td>6</td>
<td>No evidence of cracking</td>
<td>Rating 5</td>
<td>Laminate grade (HGS) Rating, min. 4</td>
</tr>
<tr>
<td>ST171137/30</td>
<td>6</td>
<td>No evidence of cracking</td>
<td>Rating 5</td>
<td></td>
</tr>
<tr>
<td>ST171137/31</td>
<td>6</td>
<td>No evidence of cracking</td>
<td>Rating 5</td>
<td></td>
</tr>
<tr>
<td>ST171137/32</td>
<td>6</td>
<td>No evidence of cracking</td>
<td>Rating 5</td>
<td></td>
</tr>
</tbody>
</table>

Rating 5 : No evidence of cracking

Remarks:
1.) The test results relate only to the samples tested.
2.) The test configuration, the test samples and the samples after test are shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

Checked by: [Signature]  Date: 02 JAN 2019  Certified by: [Signature]  Date: 02 JAN 2019

Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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Test Configuration
Sample I.D.: ST171137/29-32

Test Sample
Sample I.D.: ST171137/29-32

Sample After Test
Sample I.D.: ST171137/29-32

**End of Report**
REPORT ON RESISTANCE TO STAINING OF LAMINATE

Information Supplied by Client
Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information
Lab. Sample I.D. : ST171137/34a-34e
Date Received : 22 November 2017
Date Tested : 15 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab Sample I.D.</th>
<th>Test Material</th>
<th>Observation</th>
<th>Result (Rating)</th>
<th>Requirement (Laminate grade, HGS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/34a</td>
<td>Acetone</td>
<td>No change</td>
<td>5</td>
<td>Rating, min. 5</td>
</tr>
<tr>
<td>ST171137/34b</td>
<td>Coffee</td>
<td>No change</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>ST171137/34c</td>
<td>Shoe Polish</td>
<td>No change</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>ST171137/34d</td>
<td>Sodium Hydroxide (25% solution)</td>
<td>No change</td>
<td>5</td>
<td>Rating, min. 4</td>
</tr>
<tr>
<td>ST171137/34e</td>
<td>Hydrogen Peroxide (30% solution)</td>
<td>No change</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Rating 5 : No change

Remarks: 1.) The test results relate only to the samples tested.
2.) The test configuration and the samples after test are shown in the photographs on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.

Checked by: [Signature]  Date: 02 JAN 2019  Certified by: [Signature]  Date: 02 JAN 2019
Chan Chun Wai Ivan
Manager (Product Testing Laboratory)

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GEN610917
Test Configuration
Sample I.D.: ST171137/34a-34e

Sample After Test
Sample I.D.: ST171137/34a-34e

**End of Report**
REPORT ON RESISTANCE TO SCRATCHING OF LAMINATE

Information Supplied by Client

Client : GREENLAM ASIA PACIFIC PTE LTD.
Project : Testing of Laminate
Sample Description : Laminate

Laboratory Information

Lab. Sample I.D. : ST171137/33
Date Received : 22 November 2017
Date Tested : 15 December 2017

Test Results

<table>
<thead>
<tr>
<th>Lab.Sample I.D.</th>
<th>Scratch Resistance (Rating Scale)</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST171137/33</td>
<td>3</td>
<td>Laminate grade (HGS) Rating, min. 3</td>
</tr>
</tbody>
</table>

Remarks: 1.) The test results relate only to the samples tested.
2.) The sample after test is shown in the photograph on page 2 of this report.
3.) The test results comply with the requirement of BS EN 438-3 : 2016, table 5.
Sample After Test
Sample I.D.: ST171137/33

**End of Report**