Australian Wool Testing Authority Ltd - trading as AWTA Product Testing A.B.N. 43 006 014 106 1st Floor, 191 Racecourse Road, Flemington, Victoria 3031

AWTA PRODUCT TESTING

P.O. Box 240, North Melbourne, Victoria 3051 Phone (03) 9371 2400 Fax (03) 9371 2499

## **TEST REPORT**

| CLIENT : VERTILUX PTY LTD<br>PO BOX 611<br>TULLAMARINE VIC 3043                                                                                                                                                                                                                                                    |                                                                                                                                                |                                                                                                     |                                                                                                  | TEST NUMBER : 7-575401-BV<br>ISSUE DATE : 19/10/2010<br>PRINT DATE : 27/10/2010<br>ORDER NUMBER : 82424 |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                    | Woven coated                                                                                                                                   | osition: 100%<br>: 265g/m2<br>ry                                                                    | 61925149                                                                                         |                                                                                                         |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                | st for Heat a<br>s and Product<br>Calorimeter                                                       |                                                                                                  |                                                                                                         | S                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Results:-                                                                                                                                                                                                                                                                                                          | 122223232323                                                                                                                                   | 11122222223                                                                                         | 31212232                                                                                         | 42525852                                                                                                | £001032221222                                                                               | 122222282860444                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                    | 1                                                                                                                                              | Specimen<br>2                                                                                       | 3                                                                                                | Mean                                                                                                    |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Average Heat Releas<br>Rate                                                                                                                                                                                                                                                                                        | e<br>28.6                                                                                                                                      | 29.1                                                                                                | 30.8                                                                                             | 29.5                                                                                                    | kW/m2                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Average Specific<br>extinction area<br>(according to Speci                                                                                                                                                                                                                                                         | 392.1<br>fication C1.                                                                                                                          |                                                                                                     | 397.7<br>Iding Code                                                                              |                                                                                                         | m2/kg<br>ia)                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Test orientation: H                                                                                                                                                                                                                                                                                                | orizontal                                                                                                                                      | 196535555                                                                                           | 1111111                                                                                          | I ANALSS                                                                                                | STEPHENE !!                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1.21.21.22.27.288.899                                                                                                                                                                                                                                                                                              |                                                                                                                                                | Specimen                                                                                            | Zararara                                                                                         | 25.21.22.22                                                                                             | 在在北方理会理想并在于主义?                                                                              | 医多氏学的多层学生的方法                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 634000000000000000000000000000000000000                                                                                                                                                                                                                                                                            | 12020314344                                                                                                                                    |                                                                                                     | 2                                                                                                | Maan                                                                                                    | 101090202020303055                                                                          | A REPORT OF A DESCRIPTION OF A DESCRIPTI |
| Irradiance<br>Exhaust flow rate<br>Time to sustained f<br>Test duration                                                                                                                                                                                                                                            |                                                                                                                                                | 2<br>50<br>24<br>16<br>208                                                                          | 3<br>50<br>24<br>15<br>206                                                                       | Mean<br>50<br>24<br>16<br>211                                                                           | kW/m2<br>l/s<br>s                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Exhaust flow rate<br>Time to sustained f<br>Test duration                                                                                                                                                                                                                                                          | 50<br>24<br>laming 16<br>218                                                                                                                   | 50<br>24<br>16<br>208                                                                               | 50<br>24<br>15<br>206                                                                            | 50<br>24<br>16<br>211                                                                                   | l/s<br>s<br>s                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Exhaust flow rate<br>Time to sustained f<br>Test duration                                                                                                                                                                                                                                                          | 50<br>24<br>laming 16<br>218                                                                                                                   | 50<br>24<br>16<br>208                                                                               | 50<br>24<br>15<br>206                                                                            | 50<br>24<br>16<br>211                                                                                   | l/s<br>s<br>s                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Exhaust flow rate<br>Time to sustained f<br>Test duration<br>Heat release rate c<br>Peak heat release<br>after ignition<br>Average heat at 60s<br>Release rate at 180<br>After ignition at 3<br>Total heat released<br>Average effective h                                                                         | 50<br>24<br>laming 16<br>218<br>urve on attac<br>171.5<br>68.1<br>s 31.7<br>00s N/A<br>5.8<br>eat                                              | 50<br>24<br>16<br>208<br>ched sheets w<br>222.5<br>79.2<br>30.7<br>N/A<br>5.6                       | 50<br>24<br>15<br>206<br>which form<br>199.4<br>77.0<br>32.2<br>N/A<br>5.9                       | 50<br>24<br>16<br>211<br>part of thi<br>197.8<br>74.8<br>31.5<br>N/A<br>5.8                             | l/s<br>s<br>s<br>report<br>kW/m2<br>kW/m2<br>kW/m2<br>kW/m2<br>kW/m2<br>MJ/m2               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Exhaust flow rate<br>Time to sustained f<br>Test duration<br>Heat release rate c<br>Peak heat release<br>after ignition<br>Average heat at 60s<br>Release rate at 180<br>After ignition at 3<br>Total heat released<br>Average effective h<br>of combustion                                                        | 50<br>24<br>laming 16<br>218<br>urve on attac<br>171.5<br>68.1<br>s 31.7<br>00s N/A<br>5.8<br>eat<br>19.5                                      | 50<br>24<br>16<br>208<br>ched sheets w<br>222.5<br>79.2<br>30.7<br>N/A<br>5.6<br>18.1               | 50<br>24<br>15<br>206<br>which form<br>199.4<br>77.0<br>32.2<br>N/A<br>5.9<br>21.1               | 50<br>24<br>16<br>211<br>part of thi<br>197.8<br>74.8<br>31.5<br>N/A<br>5.8<br>19.5                     | l/s<br>s<br>s<br>s<br>report<br>kW/m2<br>kW/m2<br>kW/m2<br>kW/m2<br>kW/m2<br>MJ/m2<br>MJ/kg |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Exhaust flow rate<br>Time to sustained f<br>Test duration<br>Heat release rate c<br>Peak heat release<br>after ignition<br>Average heat at 60s<br>Release rate at 180<br>After ignition at 3<br>Total heat released<br>Average effective h<br>of combustion<br>Initial thickness<br>Initial mass<br>Mass remaining | 50<br>24<br>laming 16<br>218<br>urve on attac<br>171.5<br>68.1<br>s 31.7<br>00s N/A<br>5.8<br>eat                                              | 50<br>24<br>16<br>208<br>ched sheets w<br>222.5<br>79.2<br>30.7<br>N/A<br>5.6                       | 50<br>24<br>15<br>206<br>which form<br>199.4<br>77.0<br>32.2<br>N/A<br>5.9                       | 50<br>24<br>16<br>211<br>part of thi<br>197.8<br>74.8<br>31.5<br>N/A<br>5.8                             | l/s<br>s<br>s<br>report<br>kW/m2<br>kW/m2<br>kW/m2<br>kW/m2<br>kW/m2<br>MJ/m2               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Exhaust flow rate<br>Time to sustained f<br>Test duration<br>Heat release rate c<br>Peak heat release<br>after ignition<br>Average heat at 60s<br>Release rate at 180<br>After ignition at 3<br>Total heat released<br>Average effective h<br>of combustion<br>Initial thickness<br>Initial mass                   | 50<br>24<br>laming 16<br>218<br>urve on atta<br>171.5<br>68.1<br>s 31.7<br>00s N/A<br>.5.8<br>eat<br>19.5<br>0.5<br>2.5<br>0.0<br>100.0<br>2.5 | 50<br>24<br>16<br>208<br>ched sheets w<br>222.5<br>79.2<br>30.7<br>N/A<br>5.6<br>18.1<br>0.5<br>2.6 | 50<br>24<br>15<br>206<br>which form<br>199.4<br>77.0<br>32.2<br>N/A<br>5.9<br>21.1<br>0.5<br>2.4 | 50<br>24<br>16<br>211<br>part of thi<br>197.8<br>74.8<br>31.5<br>N/A<br>5.8<br>19.5<br>0.5<br>2.5       | <pre>1/s s s s report kW/m2 kW/m2 kW/m2 kW/m2 MJ/m2 MJ/kg mm g</pre>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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 This Laboratory is accredited by the National Association of Testing Authorities, Australia, for:

 -Chemical Testing of Textiles & Related Products
 :
 Accreditation No.
 983

 -Mechanical Testing of Textiles & Related Products
 :
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## **TEST REPORT**

| CLIENT : VERTILUX PTY LTD<br>PO BOX 611                                                                                                                                                                                                                                                               | TEST NUMBER : 7-575401-BV<br>ISSUE DATE : 19/10/2010                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| TULLAMARINE VIC 3043                                                                                                                                                                                                                                                                                  | PRINT DATE : 27/10/2010<br>ORDER NUMBER : 82424                                                                          |
| The formulae given in the Building Code of Aus<br>inaccuracies in determination of Group Number<br>this AWTA Product Testing no long reports Grou<br>calculation of Group Number is available from<br>Building Codes Board. Group Number calculation<br>described in this report can be undertaken at | for certain materials. Due to<br>up Numbers. The formulae for<br>the website of the Australian<br>n based on the results |
| Tests were conducted with a simulated airgap<br>resting on a 12mm spacer<br>Tests were conducted with a wire grid placed<br>This was done to contain the sample within th<br>sample from curling around the igniter                                                                                   | over the sample during testing.                                                                                          |
| These test results relate only to the behaviou<br>conditions of the test, they are not intended<br>the assessment of performance under real fire                                                                                                                                                      | to be the sole criterion for                                                                                             |
|                                                                                                                                                                                                                                                                                                       |                                                                                                                          |
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| うちゃうかのためた ほしこにする アオクライ ママイのためん ほんしゅうかい                                                                                                                                                                                                                                                                |                                                                                                                          |
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**AWTA** LIMITED

MICHAEL A. JACKSON B.Sc.(Hons)