

PROFESSIONAL FIRE SAFETY TESTING

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**Australian Standard 3837 Method
of test for heat and smoke release
rates for materials and products
using an oxygen consumption
calorimeter**

**NAVURBAN UV101
(DIAMOND FINISH)**

**PRODUCT EVALUATION
AND TEST REPORT**

IGNL-3250-07-02 I01R00

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SPONSOR

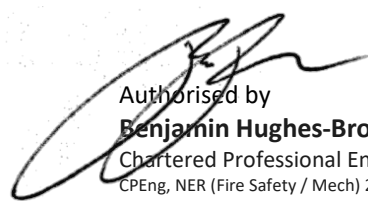
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1 INTRODUCTION

1.1 General

The purpose of this report is to document the test undertaken by Ignis Labs on the NAVURBAN UV 101 (Diamond Finish) decorative surface panels of New Age Veneers Pty Ltd. The testing was undertaken in accordance with AS/NZS 3837. The intent was to establish the safety of the material by determining its group number in accordance with requirements of AS 5637.1:2015.

1.2 Subject Test Specimens

A full test was undertaken, and the specimen characteristics are listed below.

- Specimen thickness (mm): 18.0 (Sp. 1), 18.4 (Sp. 2), 18.3 (Sp. 3)
- Specimen pre-test mass (g): 136.04 (Sp. 1), 134.58 (Sp. 2), 134.47 (Sp. 3)
- Specimen colour: Light brown

The specimens before the test are shown below:

FIGURE 1:
SPECIMENS



1.3 Sponsor

New Age Veneers Pty Ltd
Unit 14, 22-24 Beaumont Rd,
Mt. Kuring-Gai, NSW 2080

1.4 Manufacturer

The decorative wall lining material is manufactured by New Age Veneers Pty Ltd.

1.5 Test Number

The Ignis Labs reference test number is **IGNL-3250-07-02**.

1.6 Test date

The test was conducted on 18 November 2019.

2 TEST SUMMARY

| | | | | | | | | |
|---|--------------------------|---|-----------|-----------|-----------|------|------|----------|
| Test Heat Flux (kW/m ²) | 50.0 | | | | | | | |
| | | Sp 1 | Sp 2 | Sp 3 | Sp 4 | Sp 5 | Sp 6 | Mean |
| Thickness (mm) | | 18 | 18.4 | 18.31 | - | - | - | 18.23667 |
| Surface Area (m ²) | A _s | 0.00884 | 0.00884 | 0.00884 | - | - | - | 0.00884 |
| Mass before the Test (g) | m _i | 136.044 | 134.5773 | 134.46533 | - | - | - | 135.0289 |
| Mass after the Test (g) | m _f | 32.39431 | 29.734481 | 32.348367 | - | - | - | 31.49239 |
| Time to Ignition (sec) | t _{ig} | 39 | 31 | 36 | - | - | - | 35.33333 |
| Test start time (sec) | t _{start} | 0 | 0 | 0 | - | - | - | 0 |
| Calculation | | | | | | | | |
| Density (kg/m ³) | ρ | 854.9775 | 827.37373 | 830.74879 | - | - | - | 837.7 |
| Irradiance (kW/m ²) | | 50.38 | 50.38 | 50.38 | - | - | - | 50.38 |
| Exhaust System Flow Rate (m ³ /sec) | | 0.024 | 0.024 | 0.024 | - | - | - | 0.024 |
| Mass Loss (kg/m ²) | | 11.72508 | 11.860047 | 11.551693 | - | - | - | 11.71227 |
| Average rate of Mass Loss per unit area (g/m ² .s) | | 6.355057 | 6.3592748 | 7.3344081 | - | - | - | 6.682913 |
| Total Mass Pyrolyzed (%) | | 76.18836 | 77.905278 | 75.942969 | - | - | - | 76.67887 |
| Time to 50kW/m ² (sec) | t ₅₀ | 33.1 | 30.7 | 30.8 | - | - | - | 31.5 |
| Ignitability Index (1/min) | I _{ig} | 60/(t ₅₀ -t _{start}) | 1.813 | 1.957 | 1.949 | - | - | 1.9 |
| Test duration (sec) | | 1884 | 1896 | 1611 | - | - | - | 1797.0 |
| Peak Rate of Heat Release (0-60s) | | 281.3945 | 242.81429 | 248.95598 | - | - | - | 257.7 |
| Peak Rate of Heat Release (0-180s) | | 281.3945 | 242.81429 | 248.95598 | - | - | - | 257.7 |
| Peak Rate of Heat Release (0-300s) | | 281.3945 | 242.81429 | 248.95598 | - | - | - | 257.7 |
| Average Rate of Heat Release (0-60s) | | 229.9598 | 206.42081 | 205.52396 | - | - | - | 214.0 |
| Average Rate of Heat Release (0-180s) | | 163.4426 | 154.25726 | 143.58109 | - | - | - | 153.8 |
| Average Rate of Heat Release (0-300s) | | 146.3819 | 128.73711 | 130.50785 | - | - | - | 135.2 |
| Total Heat Released (MJ/m ²) | | 164.3958 | 127.11086 | 132.14274 | - | - | - | 141.2 |
| Average Effective Heat of Combustion (MJ/kg) | Δh _{c,eff(avg)} | 14.01082 | 10.677707 | 11.429501 | - | - | - | 12.0 |
| Average Specific Extinction Area (m ² /kg) | σ _{f(avg)} | 95.50642 | 39.481218 | 83.994973 | - | - | - | 73.0 |
| Rate of Heat Release Index (m=0.34) | I _{Q1} | 21944.47 | 17997.137 | 18599.306 | - | - | - | 19513.6 |
| Rate of Heat Release Index (m=0.93) | I _{Q2} | 1338.447 | 1175.1328 | 1216.1453 | - | - | - | 1243.2 |
| Integral Limit at 10 min | I _{Q, 10 min} | 6800 - 540 I _{ig} | 5820.929 | 5743.0023 | 5747.5093 | - | - | 5770.5 |
| Integral Limit at 2 min | I _{Q, 2 min} | 2475 - 165 I _{ig} | 2175.84 | 2152.0285 | 2153.4056 | - | - | 2160.4 |
| Integral Limit at 12 min | I _{Q, 12 min} | 1650 - 165 I _{ig} | 1350.84 | 1327.0285 | 1328.4056 | - | - | 1335.4 |
| Result | | | | | | | | |
| BCA Group Classification Prediction | | 3 | 3 | 3 | - | - | - | |

3 TEST PLOTS

FIGURE 1:

SPECIMEN 1

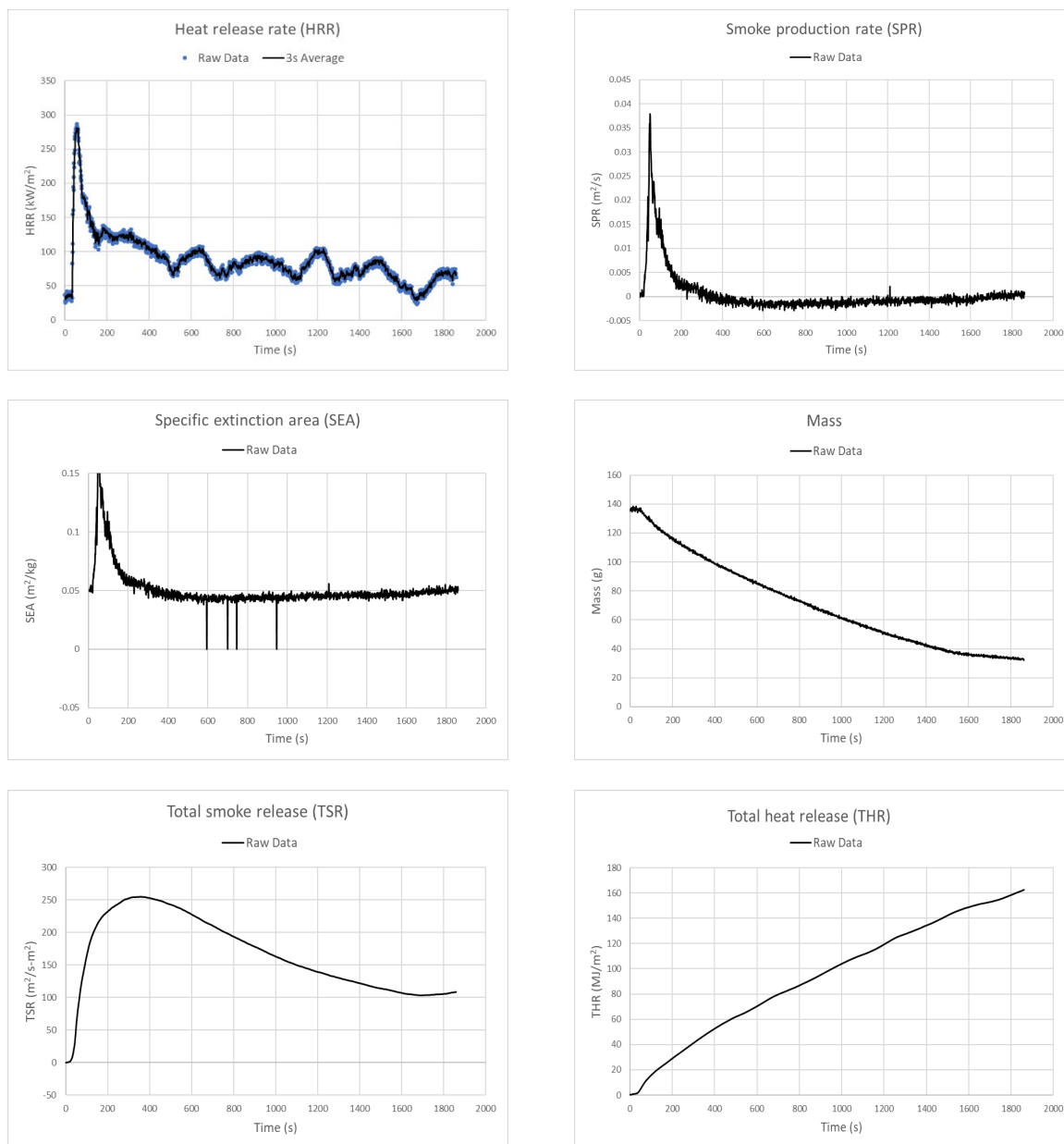


FIGURE 2:
SPECIMEN 2

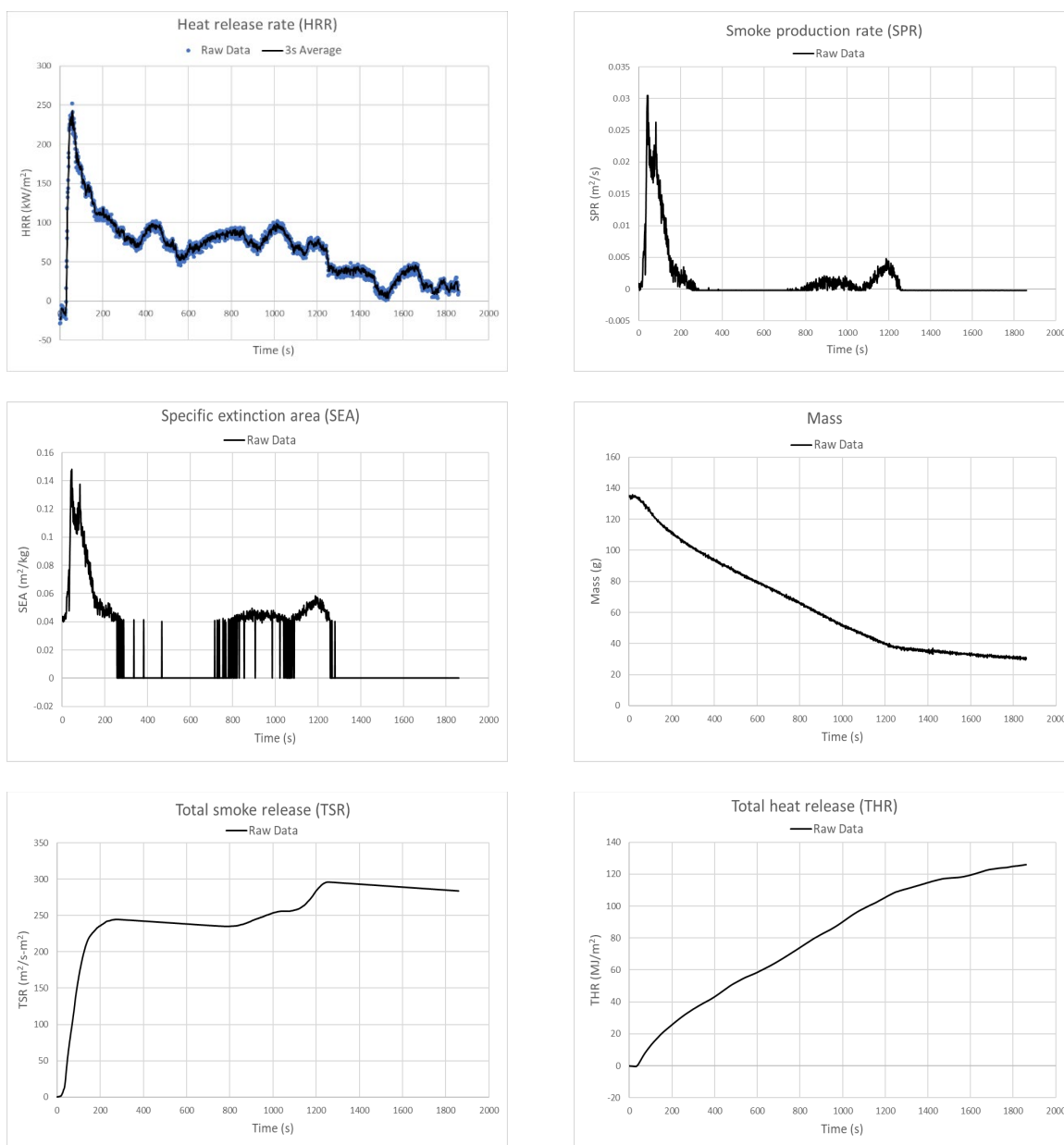
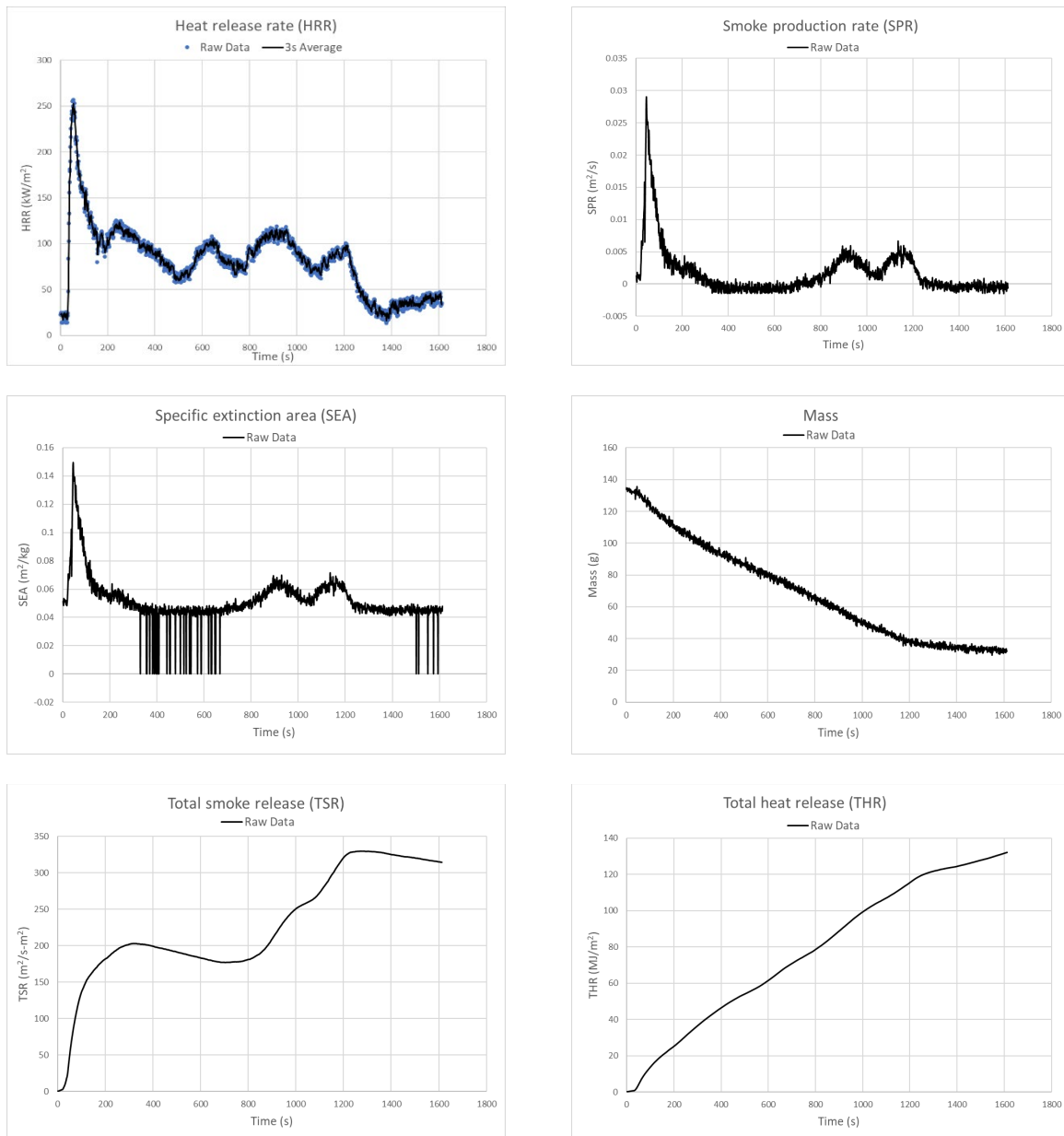


FIGURE 3:
SPECIMEN 3



4 APPLICATION OF TEST RESULTS

4.1 Test Limitations

The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions. The results reported herein shall not be exclusively used to derive a Group Number in accordance with the NCC without undertaking validation of the performance that is predicted.

4.2 Uncertainty of Measurement

Because of the nature of fire hazard property testing and the consequent difficulty in quantifying the uncertainty of measurement of fire hazard properties, it is not possible to provide a stated degree of accuracy of the result.

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--- END OF REPORT ---

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