

**Test on a homogeneous PVC wall lining at 50-kW/m²
Irradiance in accordance with AS/NZS 3837:1998**

Report number FNK 9168
CSIRO job number LP46ANK5738
Date of Issue: 2 July 2008

Client
Tarkett Australia Pty. Limited.

Commercial-in-confidence



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SUMMARY

SPONSORED INVESTIGATION REPORT No. FNK 9168

TEST ON A HOMOGENEOUS PVC WALL LINING AT 50-kW/m²
IRRADIANCE IN ACCORDANCE WITH AS/NZS 3837:1998

Sample Identification:

Wallgard

Sponsor:

Tarkett Australia Pty. Limited.
16 Anella Avenue
CASTLE HILL NSW
AUSTRALIA

Manufacturer:

Tarkett Australia Pty. Limited.
16 Anella Avenue
CASTLE HILL NSW
AUSTRALIA

Job Number:

LP46ANK5738

Test Date:

17 June 2008

Description of Sample:

The sponsor described the tested specimen as a homogeneous PVC wall lining. The specimen was applied to 6-mm thick fibre-reinforced-cement sheet using Mapei 350 or Polymer 265 water based adhesive at an application rate of 4-m²/L.

Nominal thickness: 1.3 mm
Nominal mass: 2.21 kg/m²
Colours: various colours

Documentation:

The following documents were supplied by the sponsor as a full and complete description of the sample:

Test Agreement form and Attachment A dated 4 June 2008.

Conditioning of Specimens:

Prior to the test, the specimens were conditioned to constant mass at a temperature of 23 ± 2°C and a relative humidity of 50 ± 10%.

Test Method:

Tests were performed in accordance with Australian/New Zealand Standard 3837:1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter. All test specimens were exposed in the horizontal orientation with the standard pilot operating.

Nominally 100 x 100-mm specimens were tested as supplied. Specimens were tested with the use of an edge frame. The edge frame reduces the test surface area to 0.0088-m², and this is the area used in calculations.

For the test, specimens were wrapped in aluminium foil so that the four edges and the bottom of the specimen were covered. The foil formed a shallow tray that retained any molten material during testing.

Three specimens were tested at an irradiance level of 50-kW/m².

The nominal exhaust system flow rate for all tests was 0.024-m³/s.

A measured quantity of methanol was burnt to obtain a C factor to be used in the Heat Release calculations.

Duration of Test:

The test is terminated when any one of the following is applicable:

1. 2 minutes have passed since all flaming from the specimen ceased; and
2. the average mass loss over a 1 minute period has dropped below 150-g/m²;
3. 60 minutes have elapsed; or
4. the specimen fails to ignite after a 10 minute exposure.

Observations:**Specimen 1**

The specimen began to smoke after 13 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period had dropped below 150-g/m².

Specimen 2

The specimen began to smoke after 13 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period had dropped below 150-g/m².

Specimen 3

The specimen began to smoke after 14 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period had dropped below 150-g/m².

Results:

The results of tests as specified in the Standard are summarised in Table 1.

Table 1- Results of tests 7

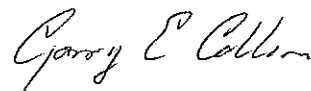
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TESTED BY:


Russell Collins
Testing Officer


Garry E Collins
Manager, Fire Testing and Assessments

2 July 2008

Test Details:

Date of test: 17/06/08

Test Report Date: 02/07/08

Methanol burn ('C' factors):0.0426

	Irradiance (kW/m ²)	Time to sustained burning (s)	Test duration (s)	Thickness (mm)	Specimen mass (g)	Mass remaining (g)	Mass loss (g)	Percent of mass pyrolysed (%)	Average rate of mass loss (g/m ² .s)	Peak HRR (kW/m ²)	Average HRR (first 60s after ign)	Average HRR (first 180s after ign)	Average HRR (first 300s after ign)	Total heat released (MJ/m ²)	Average EHC (MJ/kg)	Average specific extinction area (m ² /kg)
Sample 1	50	18	440	6.55	91.81	74.71	17.10	18.63	4.68	72.5	52.1	49.1	40.7	15.29	7.87	137.3
Sample 2	50	20	465	6.55	91.51	73.41	18.10	19.78	4.71	70.3	50.6	49.3	45.5	19.01	9.24	137.8
Sample 3	50	21	470	6.53	92.46	74.66	17.80	19.25	4.60	70.5	54.2	49.4	44.0	17.55	8.68	102.4
Mean		19.7	458.3		91.9	74.3	17.7	19.2	4.7	71.1	52.3	49.2	43.4	17.3	8.6	125.8
SD		1.5	16.1		0.5	0.7	0.5	0.6	0.1	1.2	1.8	0.2	2.5	1.9	0.7	20.3

Table 1- Results of tests

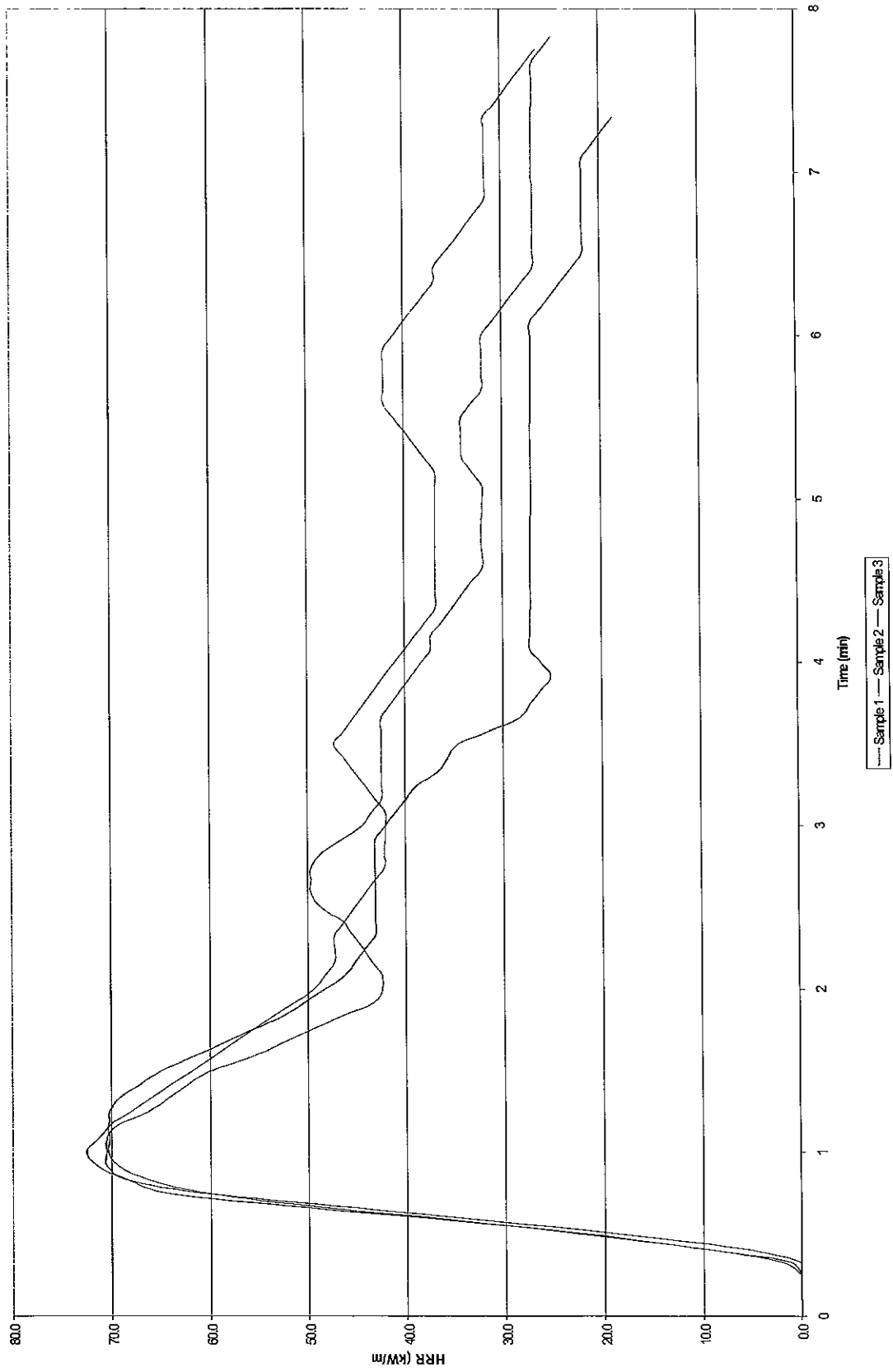


Figure 1- Heat Release Rate

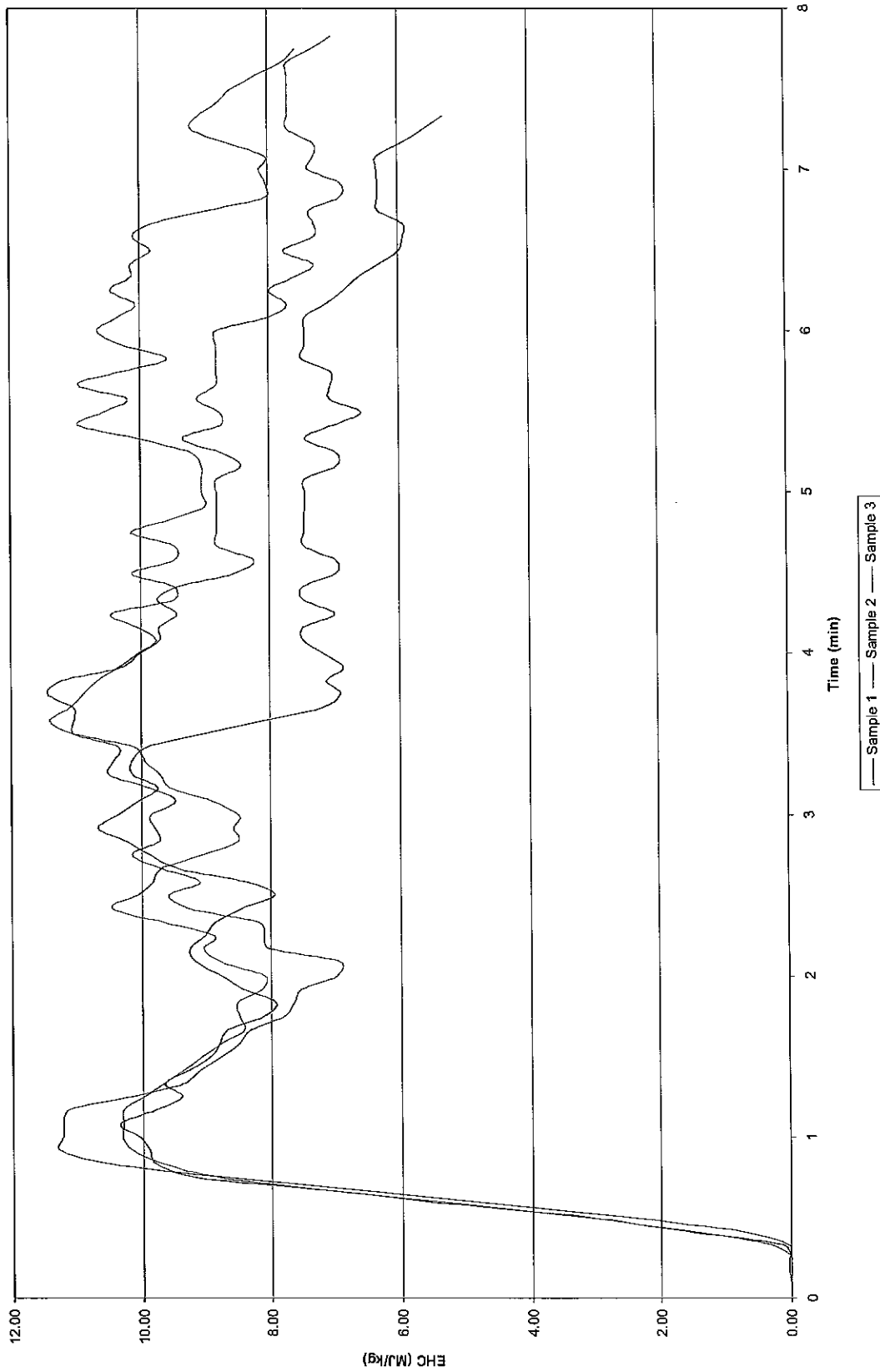


Figure 2- Effective Heat of Combustion

Certificate of Assessment 1-1097

Certificate of Assessment

LP46ANK5738

No. 1097

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This is to certify that the specimen described below was tested by the CSIRO Division of Materials Science and Engineering in accordance with Australian/ New Zealand Standard 3837, Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter, 1998, at 50 kW/m², on behalf of:

Tarket Australia Pty. Limited.
 18 Anella Avenue
 CASTLE HILL NSW
 AUSTRALIA

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FNK 9168.

SAMPLE IDENTIFICATION: Wallgard

DESCRIPTION OF SAMPLE:

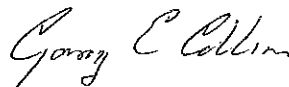
The sponsor described the tested specimen as a homogeneous PVC wall lining. The specimen was applied to 8-mm thick fibre-reinforced-cement sheet using Mapei 350 or Polymer 285 water based adhesive at an application rate of 4-m²/L.

Nominal thickness: 1.3 mm
 Nominal mass: 2.21 kg/m²
 Colours: various colours

SAMPLE CLASSIFICATION: Group Number: Group 1
 (in accordance with Specification A2.4 of the Building Code of Australia.)
 Average specific extinction area: 125.8 m²/kg
 (Refer to Specification C1.10a section 3(c) of the Building Code of Australia.)

Testing Officer: Russell Collins Date of Test: 17 June 2008

Issued on the 2nd day of July 2008 without alterations or additions.



Garry E Collins
 Manager, Fire Testing and Assessments



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