KVADRAT

REACTION TO FIRE TEST REPORT

Test standard: AS/NZS 3837:1998 (R2016)
Test sponsor: Kvadrat
Product: Time Recycled 0254
Job number: RTF260621
Revision: R1.0
Test dates: 14 and 17 April 2026

Accredited for compliance with ISO/IEC 17025:2017 – Testing

JENSEN HUGHES

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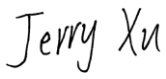
NATA
Accreditation No. 3277

Quality management

Revision	Date	Revision description		
R1.0	30 April 2026	Initial issue.		
		Prepared	**Reviewed**	**Authorised**
		Jerry Xu	Jaxsen Lee	Steven Halliday
				

Jensen Hughes Fire Testing Pty Ltd
ABN 81 050 241 524
Formerly Warringtonfire Australia Pty Ltd[1]

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1.0 Introduction

This report documents the findings of the reaction to fire test of “Time Recycled 0254” in accordance with AS/NZS 3837:1998 (R2016).

Jensen Hughes Fire Testing Pty Ltd (Jensen Hughes) performed the test on 14 and 17 April 2026 at the request of the test sponsor listed in Table 1.

Table 1 Test sponsor details

Test sponsor	Address
Kvadrat	Lundbergsvej 10 8400 Ebeltoft Denmark

2.0 Test specimens

The description of the test specimens is detailed in Table 2. Unless otherwise specified:

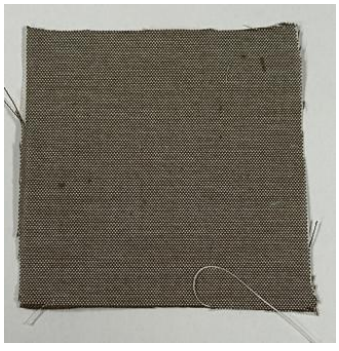
The information regarding the specimen was provided by the test sponsor.

All measurements were taken by Jensen Hughes.

Jensen Hughes was commissioned to modify the specimens so they met the geometric requirements of the test standard.

All measurements – unless indicated – were measured by Jensen Hughes.

Table 2 Test specimen description

Description		
Product	Time Recycled 0254	
Batch number	GA28588-0254	
Manufacturer	Kvadrat	
Product description (nominated by manufacturer)	The composition included 95% recycled polyester FR and 5% polyester FR. Both sides of the material were identical.	
Received size	3000 mm long × 500 mm wide × 0.36 mm thick	
Prepared sample size	100 mm long × 100 mm wide × 0.36 mm thick	
Area Density	Before conditioning: 0.20 kg/m^2 After conditioning: 0.20 kg/m^2	
Colour	Khaki	
Substrate	10 mm thick plasterboard	
Test face	One of two identical faces	
Photographs of a representative prepapred specimen	Top face	

Description		
	Bottom face	

3.0 Test procedure

Table 3 details the test procedure for this reaction to fire test.

Table 3 Test procedure

Item	Detail
Test standard	The test was performed in accordance with AS/NZS 3837:1998 (R2016).
Variations	None. As the sepcimens were very thin and light with a plasterbaord substrate, the small mass and minimal smoke generated contributed to suspect smoke results.
Pre-test conditioning	The specimens were received on 27 March 2026. Before testing, the specimens were conditioned to a constant mass at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5%.
Sampling / specimen selection	The specimens were supplied by the sponsor of the test. Jensen Hughes was not involved in any selection or sampling procedure.
Test orientation	Horizontal
Separation distance	All specimens were tested with a separation distance of 25 mm between the base plate of the cone heater and the upper surface of the specimen.
Specimen preparation	A 100 mm × 100 mm × 10 mm thick square of plasterboard was used as a substrate. All specimens were wrapped in a single layer of aluminium foil which covered the sides and the bottom.
Specimen mounting	The sample was thermally stable so additional support such as a wire grid was not used. A retaining frame was used, leaving an average exposed specimen surface area of 8.836×10^{-3} m^2. The specimen was tested without an air gap.
Spark ignitor	The spark ignitor was turned off after the specimen ignited.
Number of tests	Six specimens were subjected to an irradiance of 50 kW/m.
Test end condition	The tests were ended 2 minutes after any flaming or other signs of combustion ceased or when the average mass loss over a 1 min period has dropped below 150 g/m^2, in accordance with section 2.5.2 (e) of AS/NZS 3837:1998 (R2016).
Frequency of measurement	Data was collected every 1 second.
Orifice plate calibration factor	0.042323 (14 April 2026) and 0.042608 (17 April 2026)
Test face	One of two identical faces
Test operator	Jerry Xu

4.0 Test results and observations

4.1 Test results

Table 4 shows a summary of the results for the test specimens.

Table 4 Test results

Parameter	Abbreviation	Units	Results						Mean
			Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	
Thickness		mm	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Irradiance		kW/m^2	50	50	50	50	50	50	50
Test duration		s	218	223	267	212	202	212	222
Time to sustained flaming		s	81	63	113	63	47	52	70
Time to flame out		s	98	103	150	92	82	97	104
Exhaust flow rate		m^3/s	0.024	0.024	0.024	0.024	0.024	0.024	0.024
Sampling interval	Δt	s	1	1	1	1	1	1	1
Specimen mass									
Initial	$m_{initial}$	g	2.0	2.0	2.0	2.0	2.0	2.0	2.0
At sustained flaming	m_s	g	-1.5	-0.8	-4.0	-0.2	0.8	0.3	-0.9
Final	m_{final}	g	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average mass loss per unit area	$\dot{m}_A$	kg/m^2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Pyrolysed mass loss		wt%	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average loss rate between ignition and end of test	$\dot{m}$	g/(m^{2}s)	3.9	5.0	3.4	4.8	5.3	4.9	4.5
Average loss rate between 10% - 90% of mass loss	$\dot{m}_{A,10\text{-}90}$	g/(m^{2}s)	7.8	17.1	8.6	6.6	11.4	12.6	10.7

Parameter	Abbreviation	Units	Results						Mean
Heat release rate (HRR)									
Average for the first 60s after ignition	$\dot{q}_{A,60}$	kW/m^2	18.3	27.0	8.3	46.0	63.8	49.6	35.5
Average for the first 180s after ignition	$\dot{q}_{A,180}$	kW/m^2	8.1	10.6	3.1	16.8	22.5	17.5	13.1
Average for the first 300s after ignition	$\dot{q}_{A,300}$	kW/m^2	4.8	6.4	1.8	10.1	13.5	10.5	7.9
Peak	$\dot{q}_{max}$	kW/m^2	140.1	195.9	32.3	181.0	206.6	217.2	162.2
Total	$Q_{A,tot}$	MJ/m^2	2.7	3.8	1.2	4.0	4.6	4.0	3.4
Average effective heat of combustion	$\Delta h_{c,eff}$	MJ/kg	12.0	16.6	5.1	17.3	20.2	17.6	14.8
Smoke production									
Total during non-flaming phase	S_{A1}''	m^2/m^2	228.7	115.2	376.3	62.3	14.8	33.1	138.4
Total during flaming phase	S_{A2}''	m^2/m^2	59.8	72.1	7.9	95.3	109.6	93.5	73.0
Total	$S_{A1}'' + S_{A2}''$	m^2/m^2	288.5	187.3	384.2	157.6	124.4	126.6	211.4
Average specific extinction area	SEA	m^2/kg	1424.6	859.4	1772.2	136.0	-9.2	-53.4	688.3

4.2 Test observations

- Within 5 seconds of exposure, all specimen started to shrink.
- All specimen started to emit smoke within 24 seconds of exposure..
- Between 47 seconds and 113 seconds of exposure, all specimens had ignited.
- Between 82 seconds and 150 seconds of exposure, all specimen self-extinguished.

5.0 Application of test results

5.1 Validity

This document is the original version of this test report and is written in English. In case of doubt the original version prevails over a translation. This document is issued subject to Jensen Hughes' standard terms and conditions.

The results of these fire tests 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.

Reports are statements of fact prepared in accordance with the referenced version of the standards stated in Section 3 of this report. Reports are based upon the information provided to Jensen Hughes. Jensen Hughes takes no responsibility for the accuracy or completeness of such information.

The results stated in this report apply to the sample as received. Any differences in composition, production process, thickness, density or colour of the product may significantly affect the performance and will therefore invalidate the application of the test results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the test sponsor. The test sponsor should then obtain appropriate documentary evidence of compliance from Jensen Hughes Fire Testing or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

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The report is issued for the benefit of Jensen Hughes' direct customer only, and may not be relied upon by any third parties without Jensen Hughes' express written consent.

5.2 Uncertainty of measurement

Because of the nature of reaction to fire testing and the consequent difficulty in quantifying the uncertainty of measurements obtained from a reaction to fire test, it is not possible to provide a stated degree of accuracy of the result.

Appendix A Test data

A.1 Heat release rate

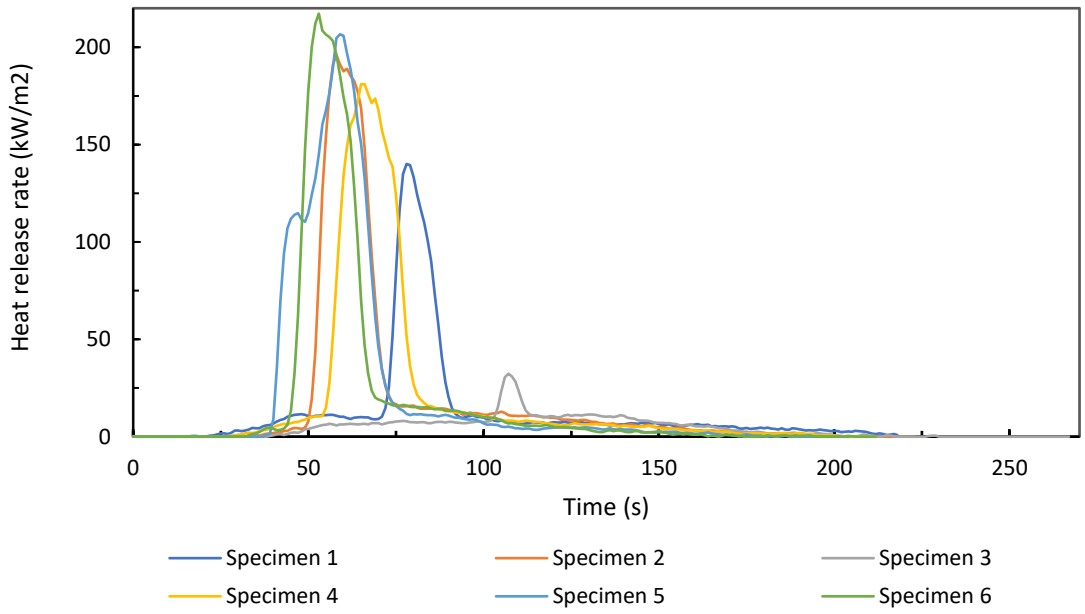

Figure 1 Heat release rate vs time

A.2 Total heat release

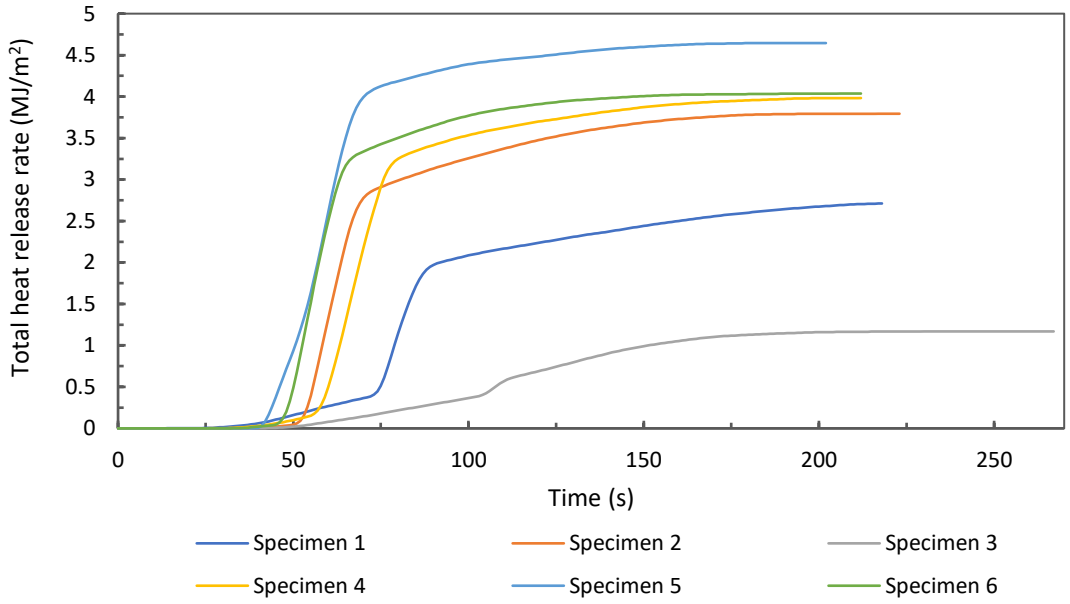

Figure 2 Total heat release vs time

A.3 Average heat release

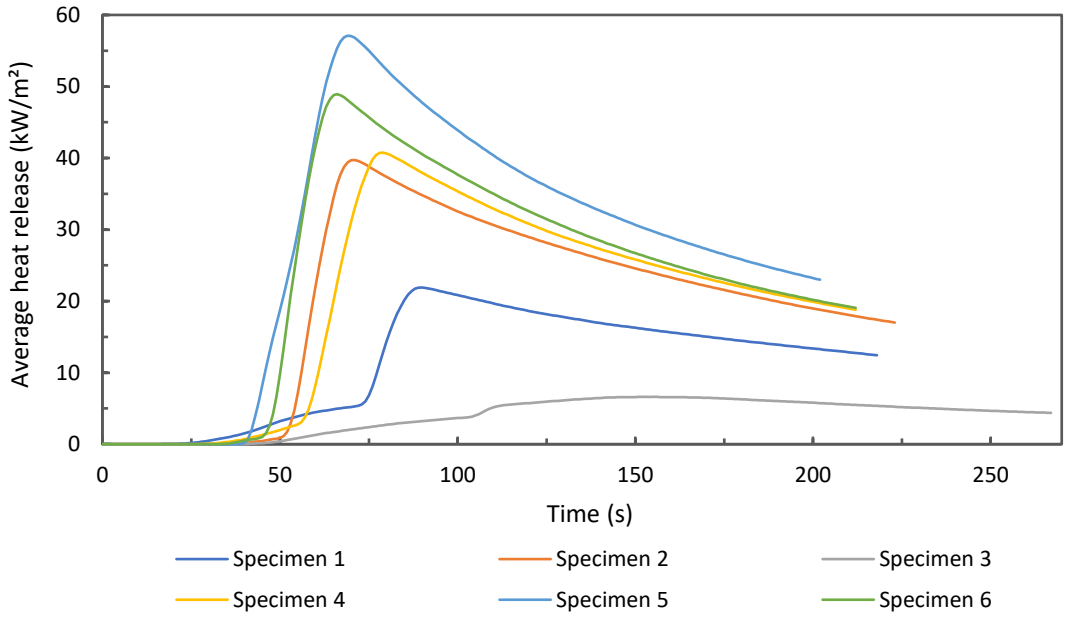

Figure 3 Average heat release vs time

A.4 Smoke production rate

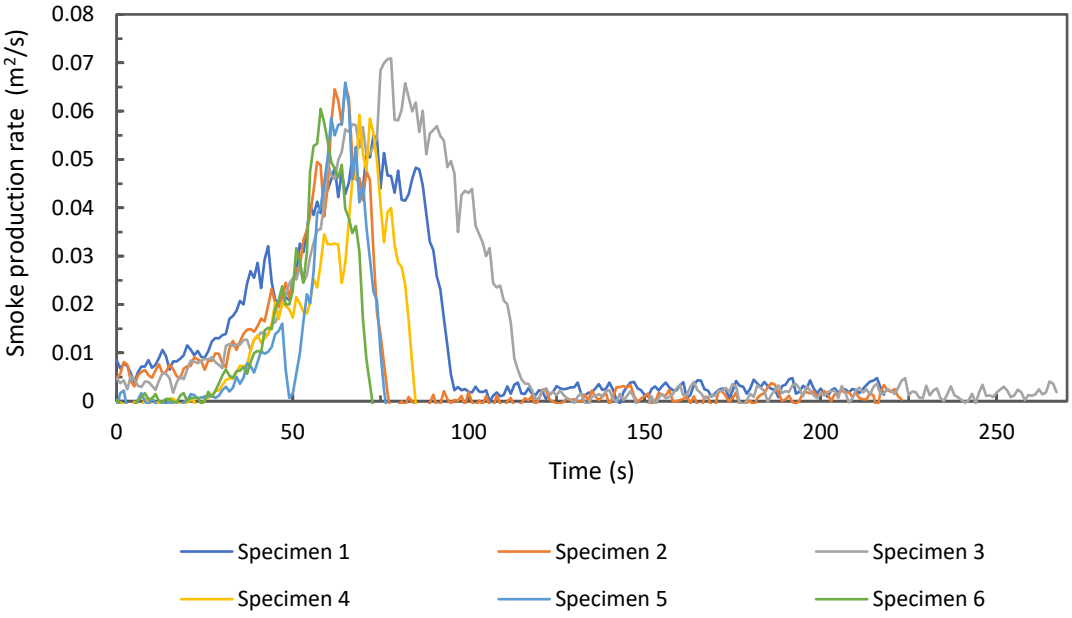

Figure 4 Smoke production rate vs time

A.5 Total smoke production

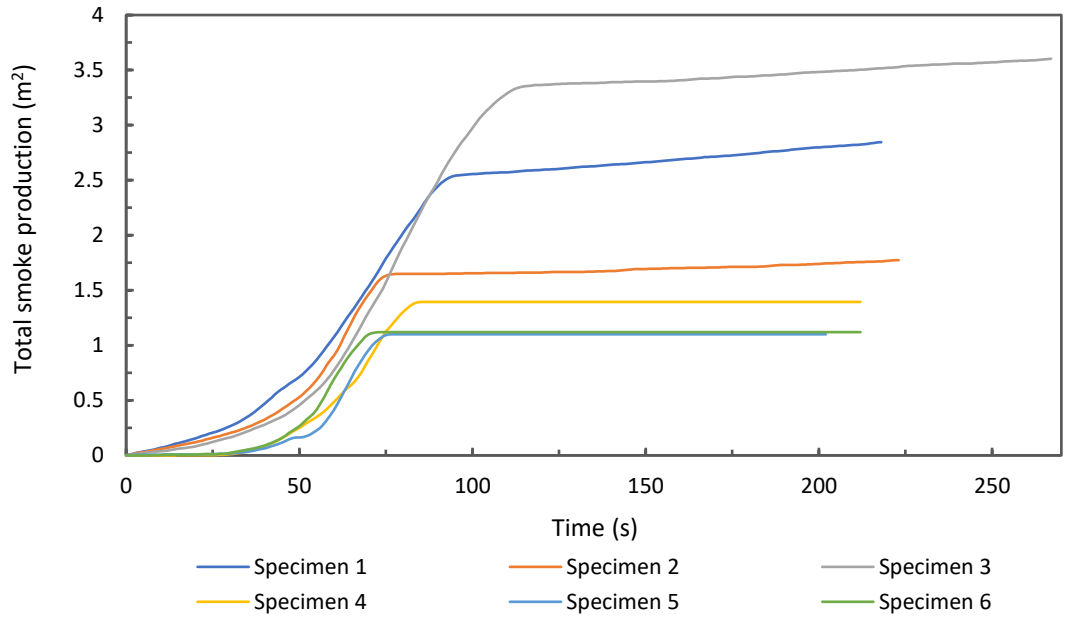

Figure 5 Total smoke production vs time

A.6 Mass loss rate

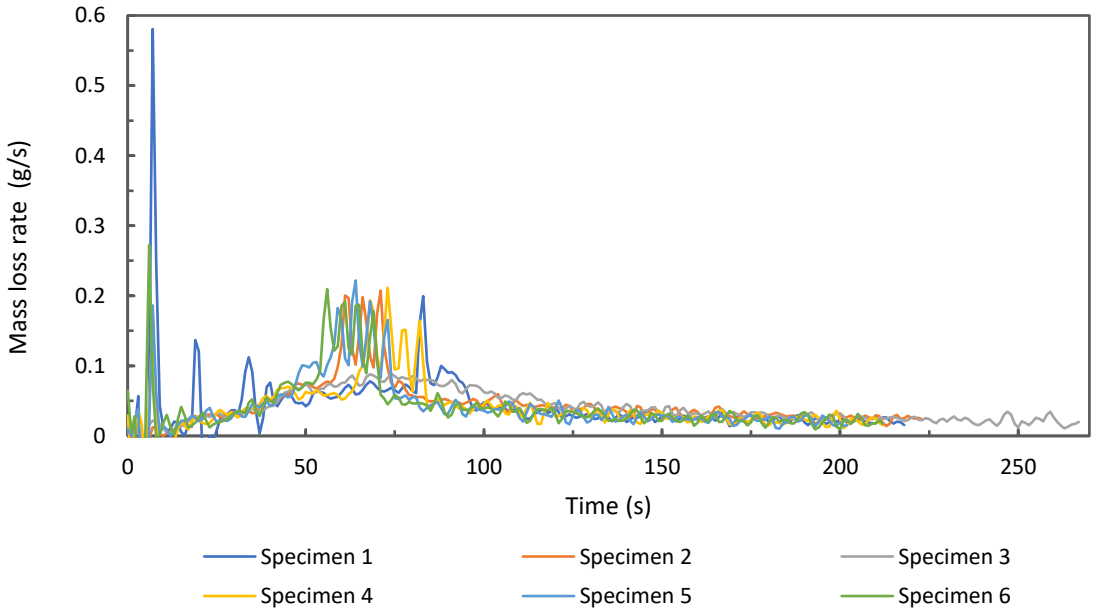

Figure 6 Mass loss rate vs time

Appendix B Test specimen photographs

Figure 7: Specimen prior to testing

Figure 8: Specimen after testing

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