

AWTA PRODUCT TESTING

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

P.O Box 240, North Melbourne, Victoria 3051

Phone (03) 9371 2400 Fax (03) 9371 2499

TEST REPORT

Client : New Zealand Wool Testing Authority Ltd
PO Box 12065
Ahuriri Napier 4144
New Zealand

Test Number : 15-002399
Issue Date : 29/05/2015
Print Date : 29/05/2015

Sample Description

Clients Ref : "Ref: 1094814.9, At Work**"

Blazer felt

Colour : Grey

Nominal Composition : 100% Wool

Nominal Mass per Unit Area/Density : 645g/lineal metre

Nominal Thickness : 1.46mm

ISO 5660.1-2002

Reaction to Fire Tests - Heat Release Smoke Production and Mass Loss Rate Part 1: Heat Release Rate (Cone Calorimeter Method)

	Specimen			Mean	
	1	2	3		
Average Heat Release Rate	11.2	9.9	12.4	11.2	kW/m ²
Group Number Classification	2S	2S	2S		

(In Accordance with New Zealand Building Code Verification Method C/VM2 Appendix A)

Average Specific extinction area	22.9	3.7	28.0	18.2	m ² /kg
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(According to ISO 5660.2-2002)

Test orientation : Horizontal

	Specimen			Mean	
	1	2	3		
Irradiance	50	50	50	50	kW/m ²
Exhaust flow rate	24	24	24	24	L/sec
Time to sustained flaming	14	13	14	14	sec
Test duration	1814	1813	1814	1814	sec

15,437

5,071

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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	:	Accreditation No.	985
- Heat & Temperature Measurement	:	Accreditation No.	1356

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Peak heat release after ignition	171.8	217.1	179.2	189.4	kW/m ²
Average heat at 60 s	82.3	100.1	79.2	87.2	kW/m ²
Average heat at 180 s	31.8	34.3	29.1	31.7	kW/m ²
Average heat at 300 s	23.3	23.2	21.0	22.5	kW/m ²
Total heat released	20.3	17.9	22.3	20.2	MJ/m ²
Average effective heat of combustion	8.3	7.2	9.0	8.2	MJ/kg
Initial thickness	7.46	7.46	7.46	7.5	mm
Initial mass	92.1	94.6	90.2	92.3	g
Mass remaining	72.2	74.6	70.1	72.3	g
Mass percentage pyrolysed	21.6	21.2	22.2	21.7	%
Mass loss	19.9	20.0	20.1	20.0	g
Average rate of mass loss	1.3	1.4	1.4	1.4	g/m ² .s

Samples were loose laid onto a substrate of 6mm thick cement sheeting prior to testing.

Tests were conducted with a wire grid placed over the sample during testing. This was done to contain intumescent sample within the sample holder.

These test results relate only to the behaviour of the product under the conditions of the test, they are not intended to be the sole criterion for assessment of performance under real fire conditions.

Note: All calculations are based on ignition + 30 minutes.

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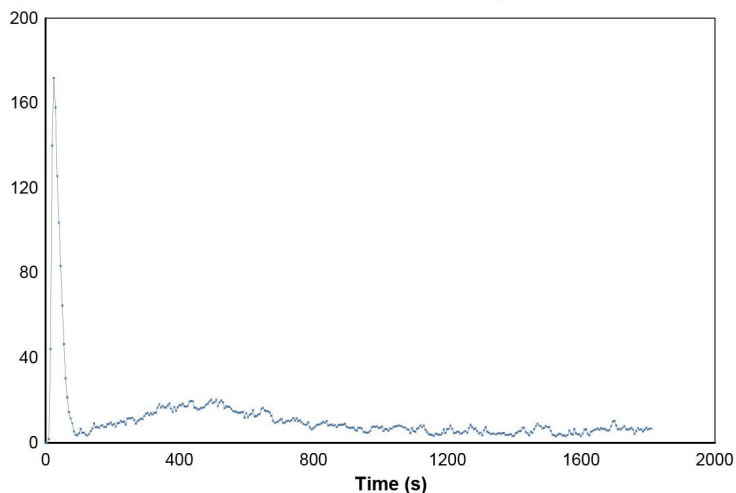
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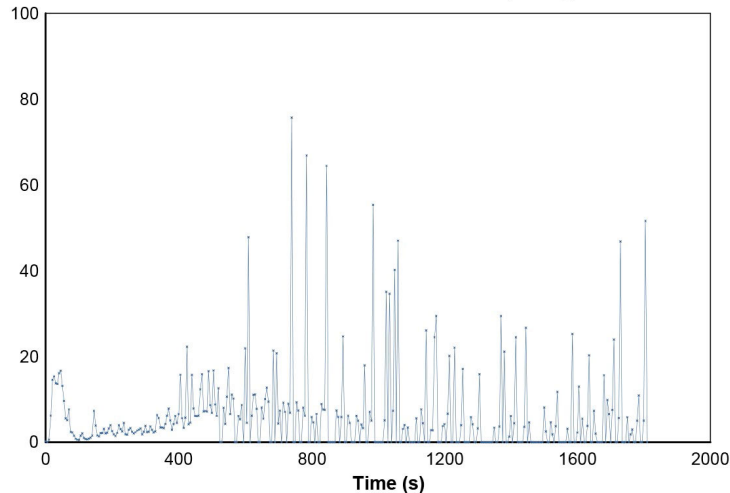
Test Number : 15-002399
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Specimen : 1

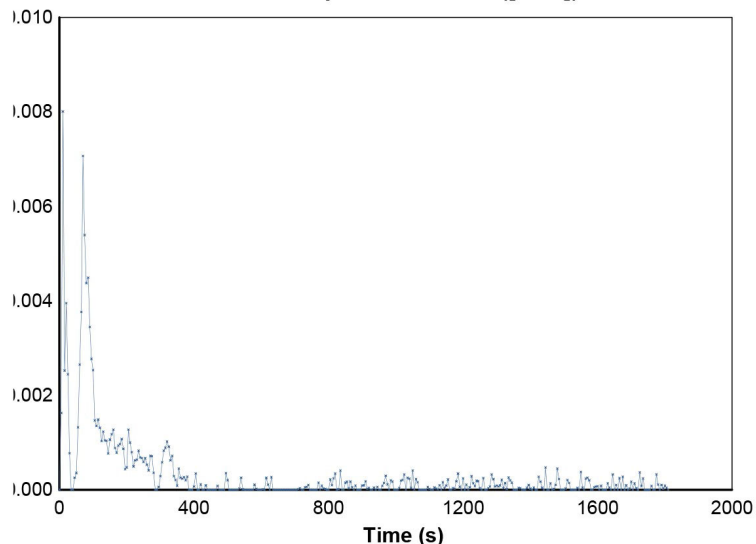
Heat release rate (kW/m²)



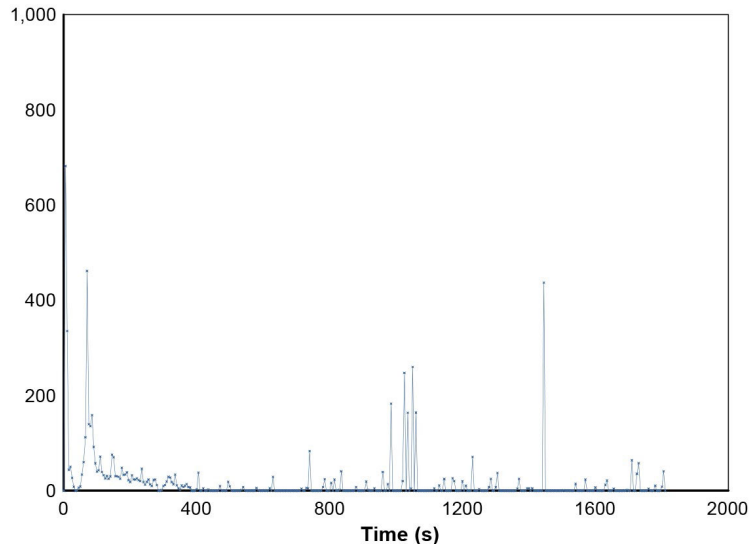
Effective heat of combustion (MJ/kg)



Smoke production rate ([m²/s])



Specific extinction area (m²/kg)



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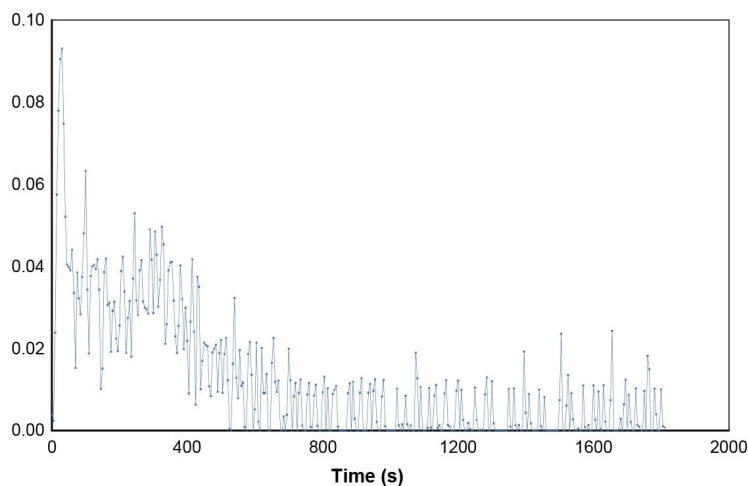
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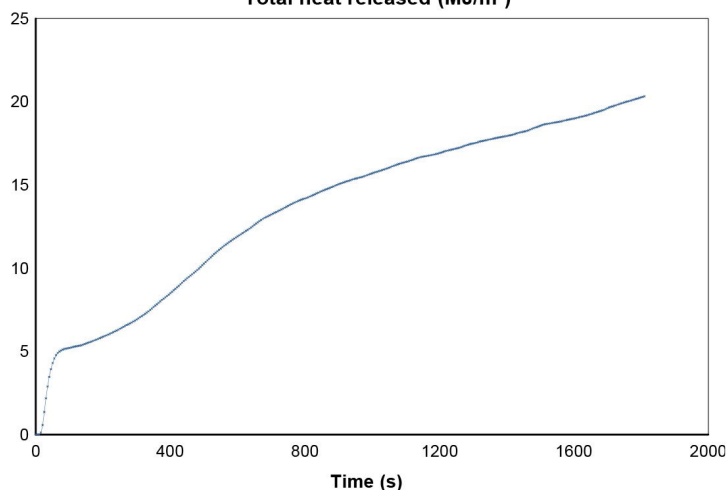
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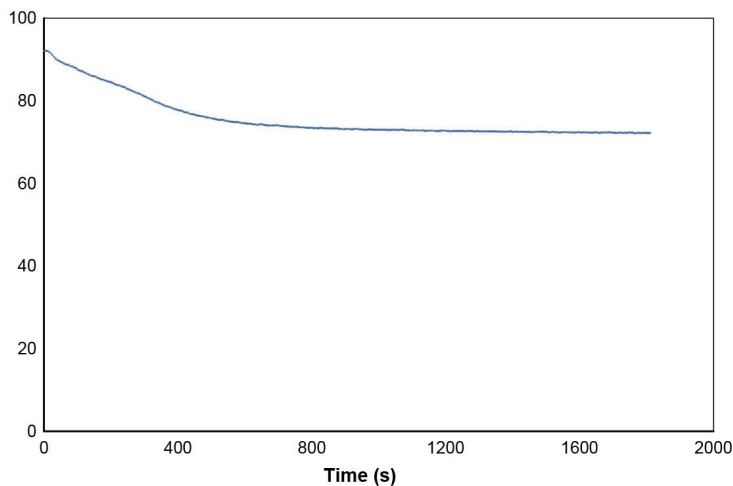
Mass loss rate (g/s)



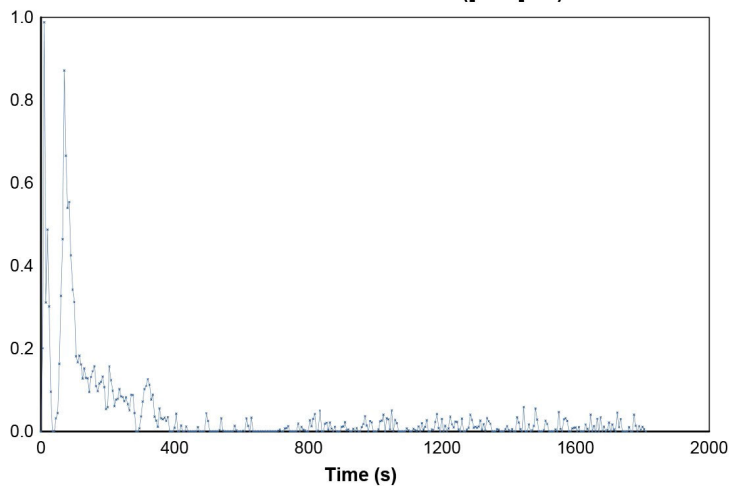
Total heat released (MJ/m²)



Mass (g)



Rate of smoke release ([m²/s]/m²)



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APPROVED SIGNATORY



MICHAEL A. JACKSON B.Sc.(Hons)
MANAGING DIRECTOR

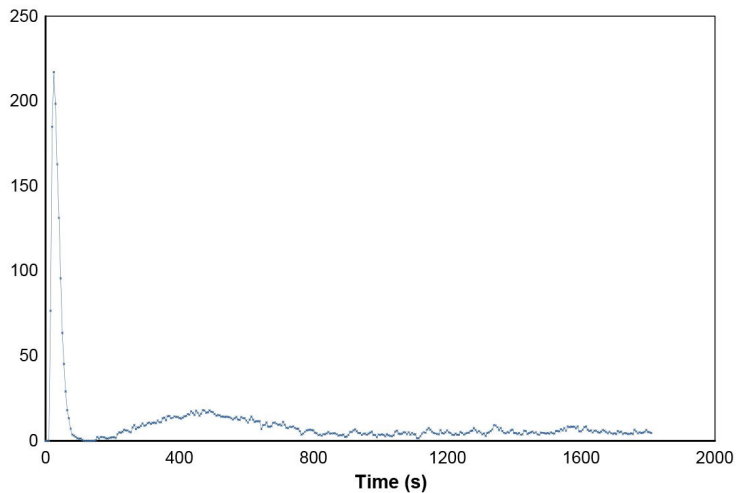
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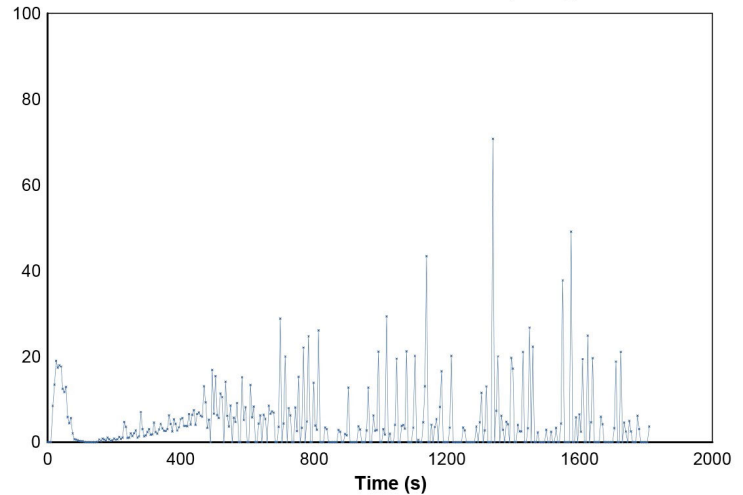
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Specimen : 2

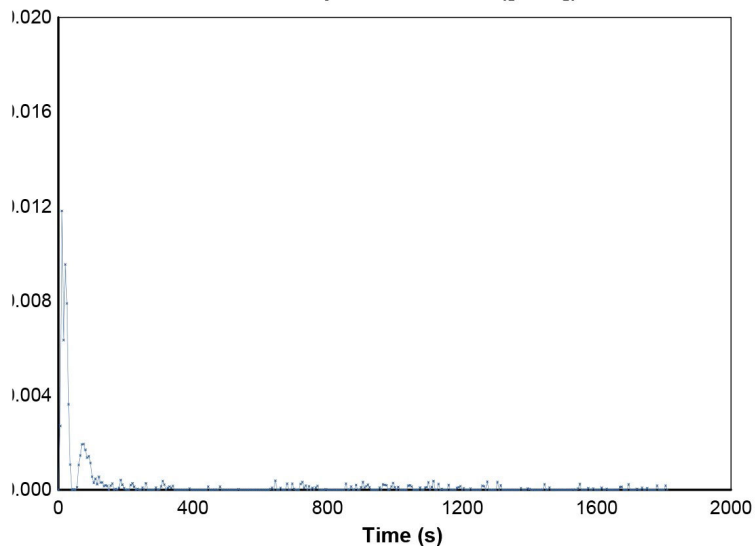
Heat release rate (kW/m²)



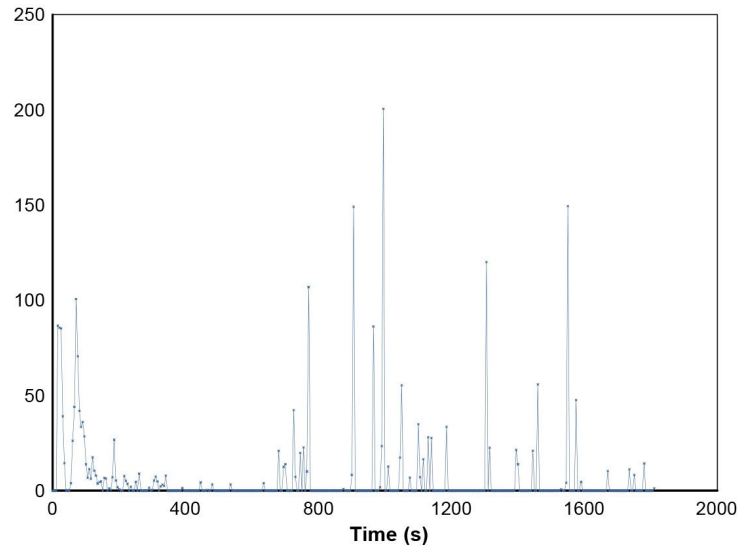
Effective heat of combustion (MJ/kg)



Smoke production rate ([m²/s])



Specific extinction area (m²/kg)



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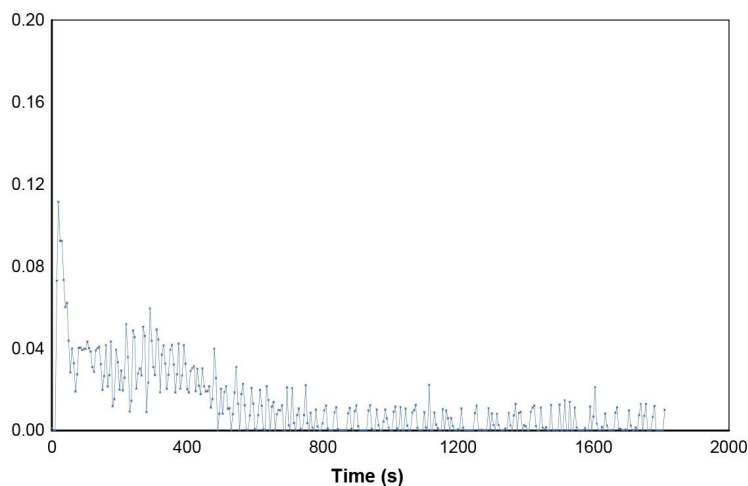
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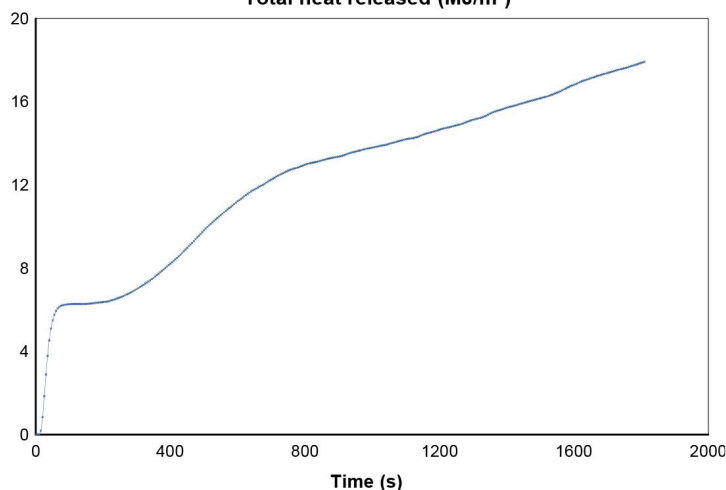
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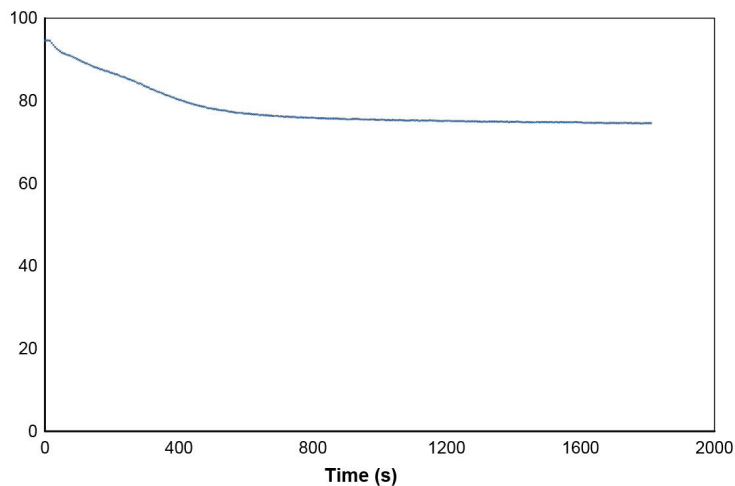
Mass loss rate (g/s)



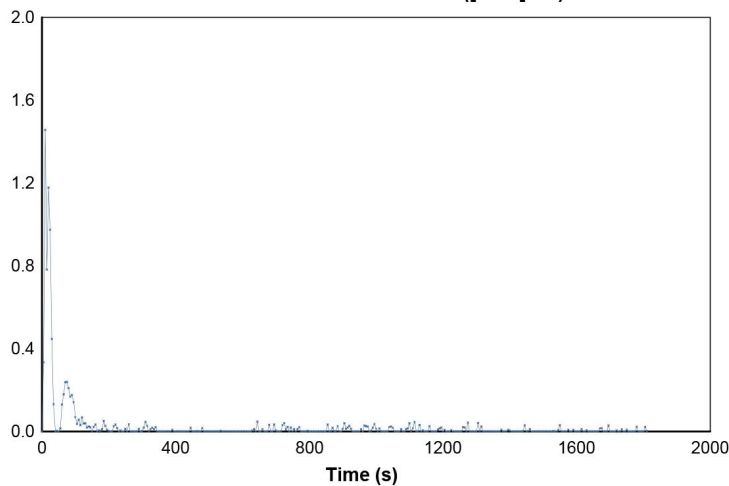
Total heat released (MJ/m²)



Mass (g)



Rate of smoke release ([m²/s]/m²)



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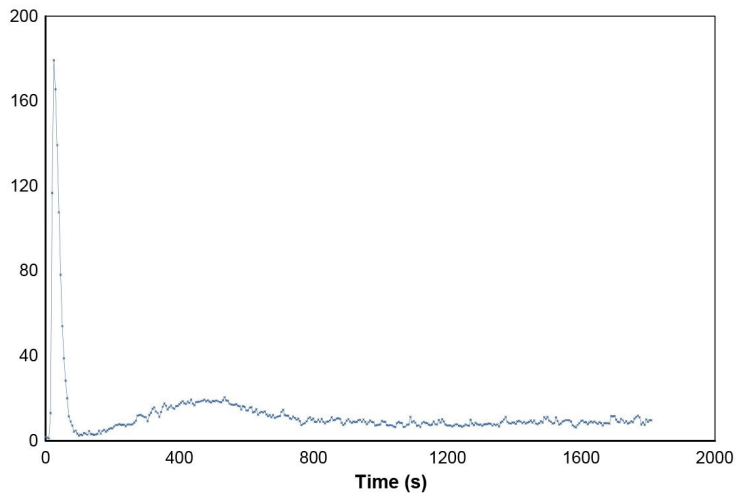
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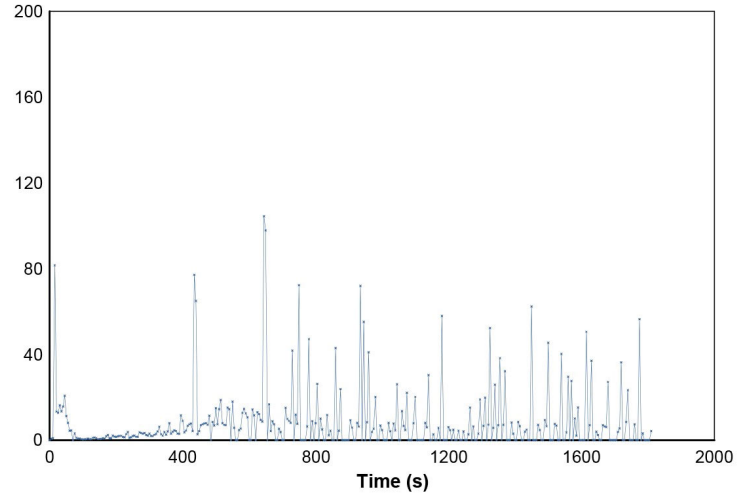
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Specimen : 3

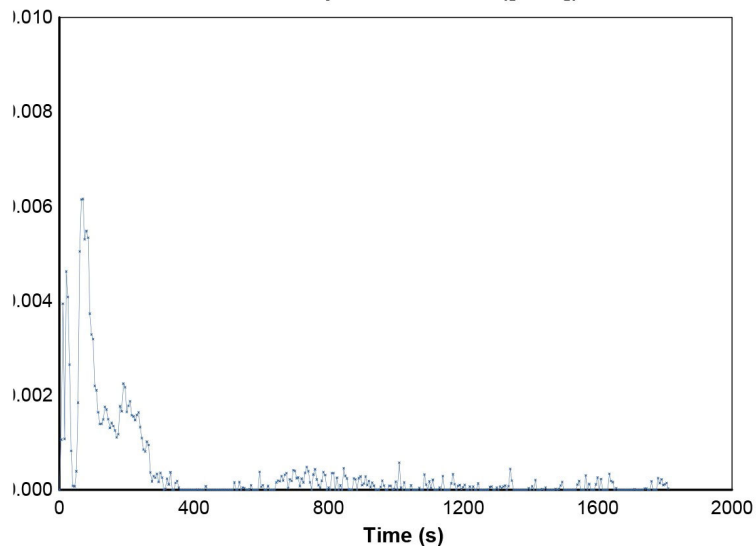
Heat release rate (kW/m²)



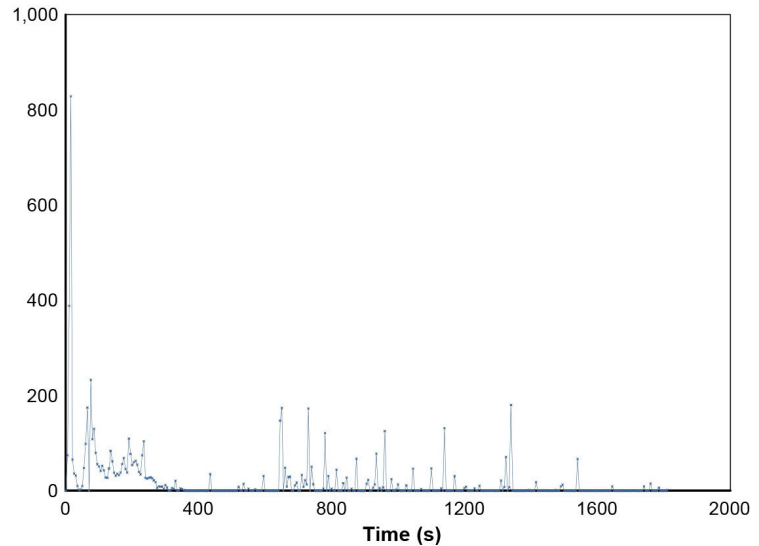
Effective heat of combustion (MJ/kg)



Smoke production rate ([m²/s])



Specific extinction area (m²/kg)



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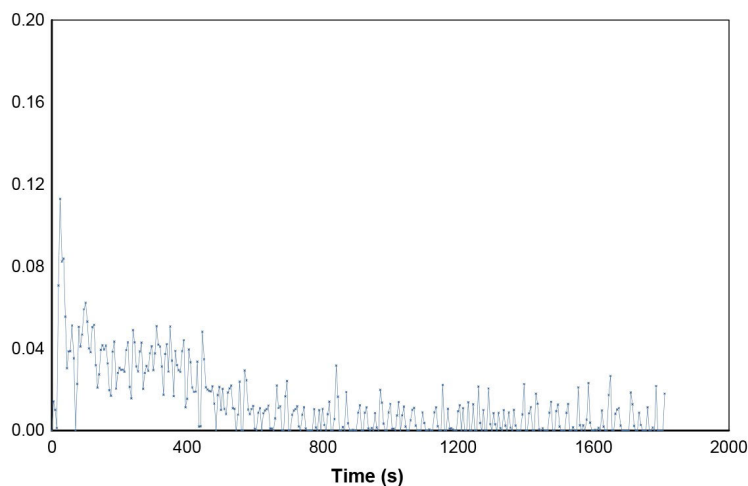
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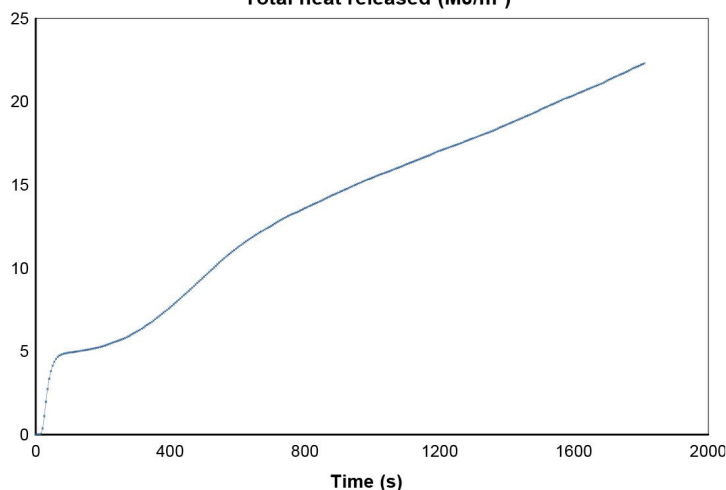
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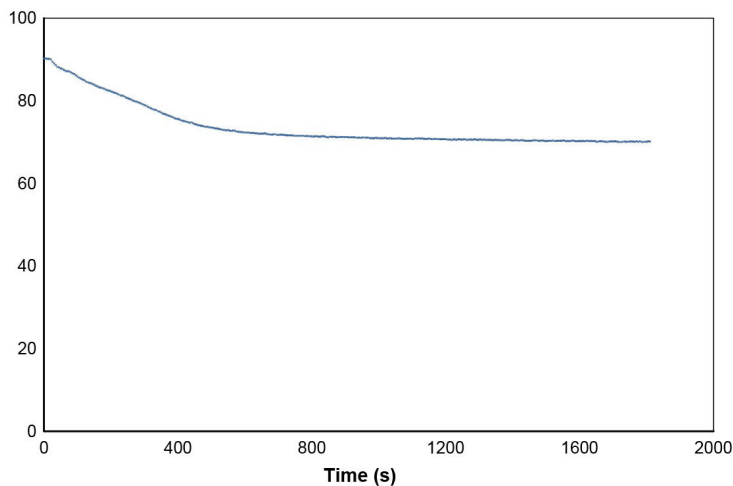
Mass loss rate (g/s)



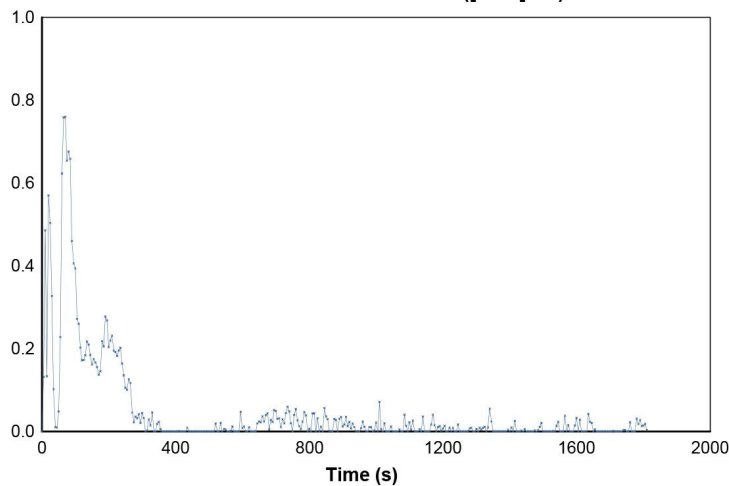
Total heat released (MJ/m²)



Mass (g)



Rate of smoke release ([m²/s]/m²)



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