

# 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

## Group Number Assessment

(In accordance with New Zealand Building Code Verification Method C/VMA Appendix A)  
(In accordance with AS 5637.1-2015)

This is to confirm that the product as described below has been tested by AWTA Product Testing.

Testing was performed in accordance with ISO 5660.1-2015 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter.

**Test Sponsor :** The Laminex Group  
22 Trewin Street  
Wendouree VIC 3355

**Test Number :** 19-001335  
**Issue Date :** 9/05/2019  
**Print Date :** 24/05/2019

### Sponsor Product

Clients Ref : "Essastone"  
Stone composite block  
Colour : White with brown grain  
Nominal Composition : Crushed quartz and binding resin  
Nominal Mass per Unit Area/Density : 2300kg/m3  
Nominal Thickness : 20mm

Product Group Number Classification : 3

Average Specific Extinction Area : 540.1 m<sup>2</sup>/kg



Chris Campbell  
Client Relations Manager

34732

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## TEST REPORT

**Client :** The Laminex Group  
22 Trewin Street  
Wendouree VIC 3355

**Test Number :** 19-001335  
**Issue Date :** 09/05/2019  
**Print Date :** 9/05/2019  
**Order Number :** 3455941

**Sample Description** Clients Ref : "Essastone"  
Stone composite block  
Colour : White with brown grain  
Nominal Composition : Crushed quartz and binding resin  
Nominal Mass per Unit Area/Density : 2300kg/m<sup>3</sup>  
Nominal Thickness : 20mm

### ISO 5660.1-2015

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

Date Tested 08/05/2019  
Operator AWTA Test Operator 3  
Face Tested Face

	Specimen				
	1	2	3	Mean	
Average Heat Release Rate	89.1	89.0	90.2	89.4	kW/m <sup>2</sup>
Average Specific extinction area	509.9	595.8	514.7	540.1	m <sup>2</sup> /kg

Test orientation : Horizontal

	Specimen				
	1	2	3	Mean	
Irradiance	50	50	50	50	kW/m <sup>2</sup>
Exhaust flow rate	0.024	0.024	0.024	0.024	m <sup>3</sup> /s
Time to sustained flaming	390	380	389	386	sec
Test duration	2190	2180	2189	2186	sec
Peak heat release after ignition	190.6	202.4	198.1	197.0	kW/m <sup>2</sup>
Average heat at 180 s	147.7	148.0	144.2	146.6	kW/m <sup>2</sup>
Average heat at 300 s	152.0	156.8	154.1	154.3	kW/m <sup>2</sup>
Total heat released	160.3	160.2	162.6	161.0	MJ/m <sup>2</sup>

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Page 1 of 8

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**Issue Date :** 09/05/2019  
**Print Date :** 9/05/2019  
**Order Number :** 3455941

Average effective heat of combustion	25.0	25.2	25.2	25.2	MJ/kg
Initial thickness	20	20	20	20.0	mm
Initial mass	456.2	457	454.7	456.0	g
Mass at sustained flaming	454.9	455.5	453.8	454.7	g
Mass remaining	404.3	405.6	402.3	404.1	g
Mass loss	6410.4	6345.7	6470.3	6408.8	g/m <sup>2</sup>
Average rate of mass loss	3.6	3.5	3.6	3.6	g/m <sup>2</sup> .s
Total smoke Production (Non Flaming phase)	53.6	70.9	30.4	51.6	m <sup>2</sup> /m <sup>2</sup>
Total smoke Production (Flaming phase)	3270.3	3780.8	3323.4	3458.2	m <sup>2</sup> /m <sup>2</sup>
Total smoke Production (Non Flaming & Flaming phase)	3323.9	3851.7	3353.8	3509.8	m <sup>2</sup> /m <sup>2</sup>
Specimen Surface area	0.00810	0.00810	0.00810	-	m <sup>2</sup>
C-Factor (Calibration Constant)	0.038659	0.038659	0.038659	-	-
Additional Observations	None				
Difficulties Encountered during Testing	None				

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.

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

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

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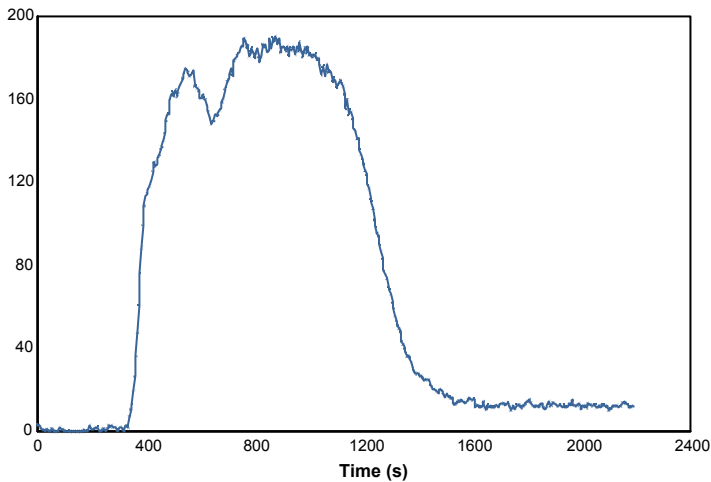
## TEST REPORT

**Client :** The Laminex Group  
22 Trewin Street  
Wendouree VIC 3355

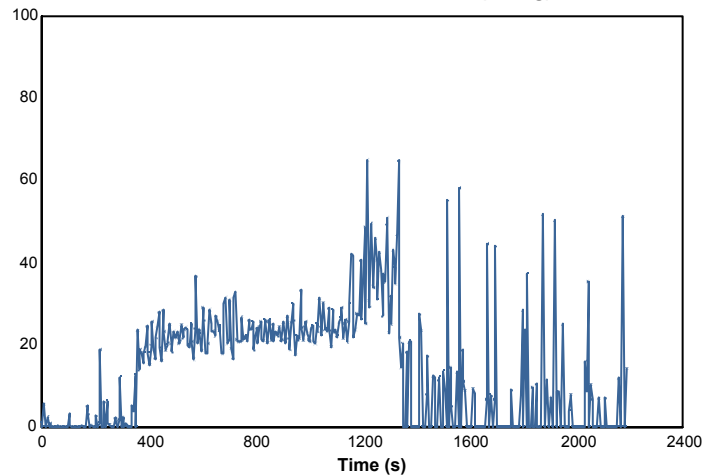
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**Issue Date :** 09/05/2019  
**Print Date :** 9/05/2019  
**Order Number :** 3455941

**Specimen :** 1

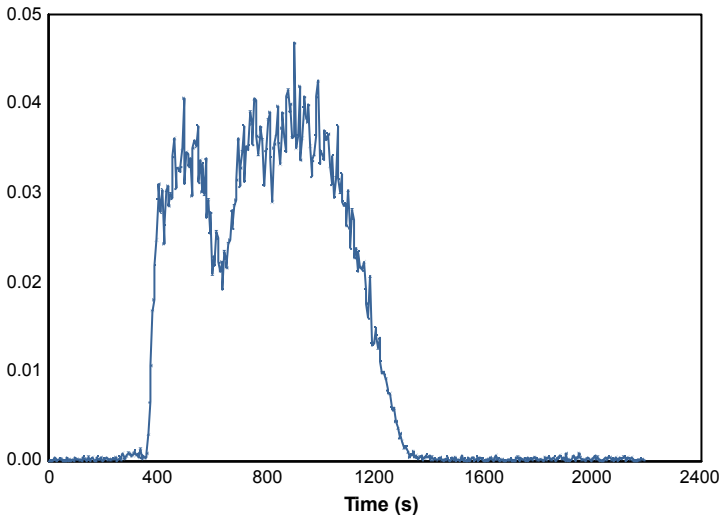
**Heat release rate (kW/m<sup>2</sup>)**



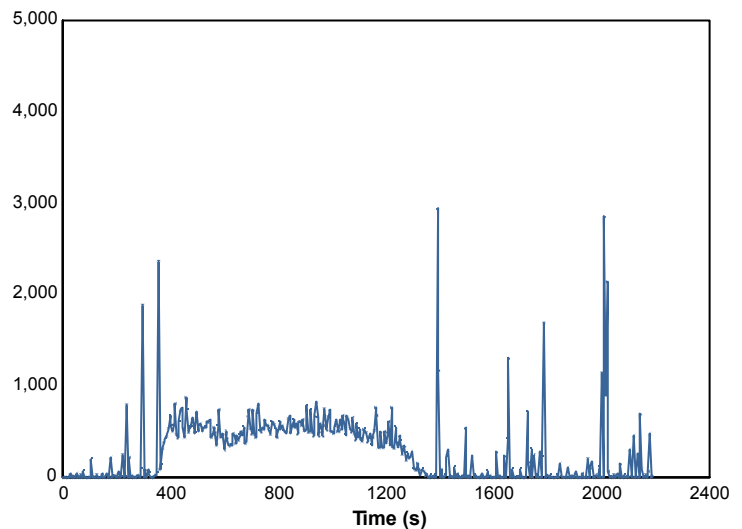
**Effective heat of combustion (MJ/kg)**



**Smoke production rate ([m<sup>2</sup>/s])**



**Specific extinction area (m<sup>2</sup>/kg)**



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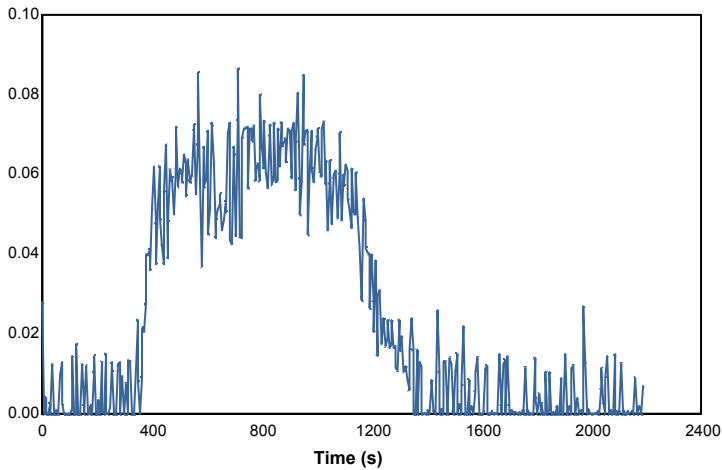
Phone (03) 9371 2400 Fax (03) 9371 2499

## TEST REPORT

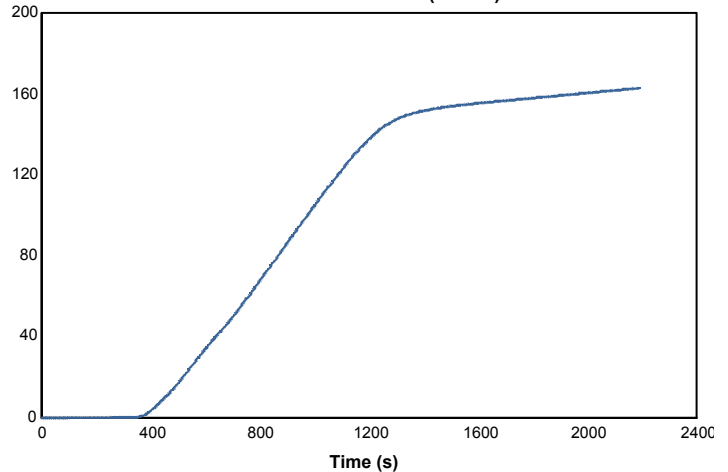
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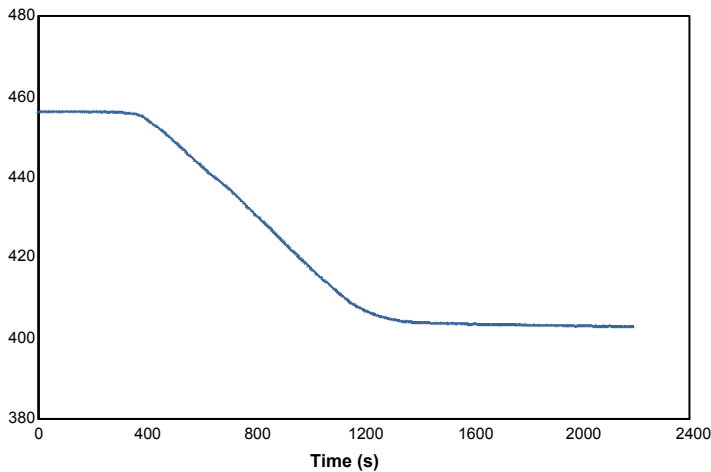
Mass loss rate (g/s)



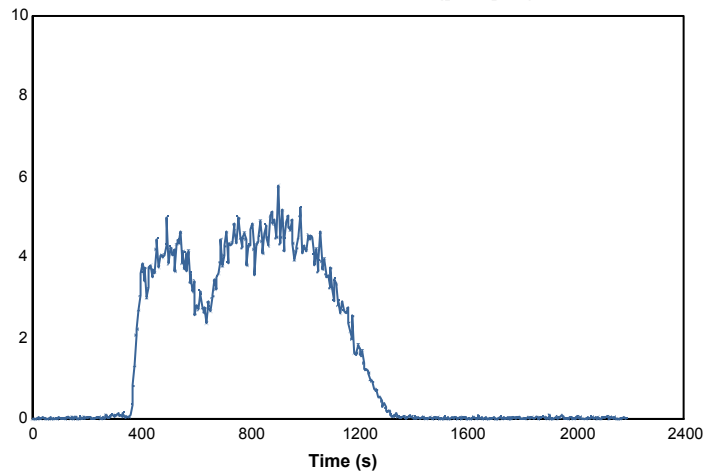
Total heat released (MJ/m²)



Mass (g)



Rate of smoke release ([m²/s]/m²)



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Page 4 of 8

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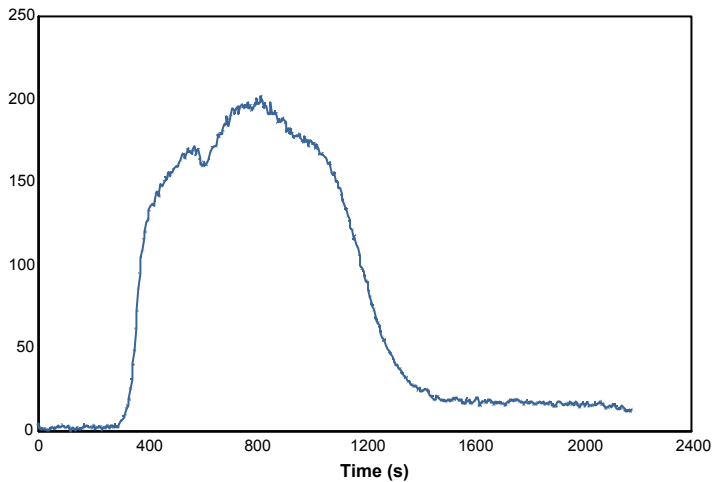
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22 Trewin Street  
Wendouree VIC 3355

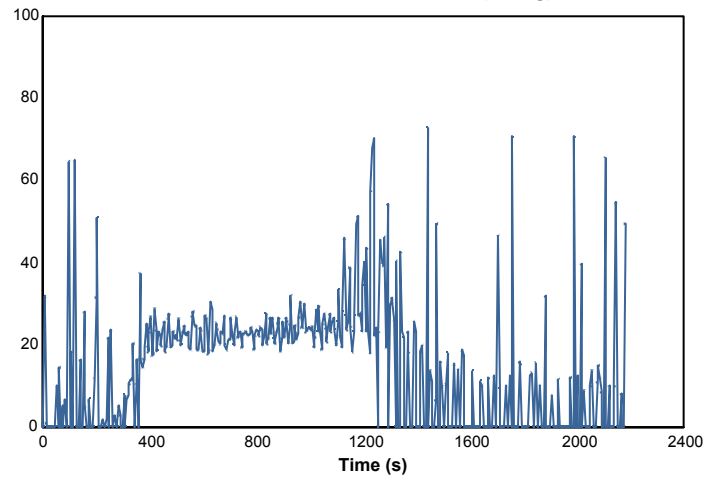
**Test Number :** 19-001335  
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**Order Number :** 3455941

**Specimen :** 2

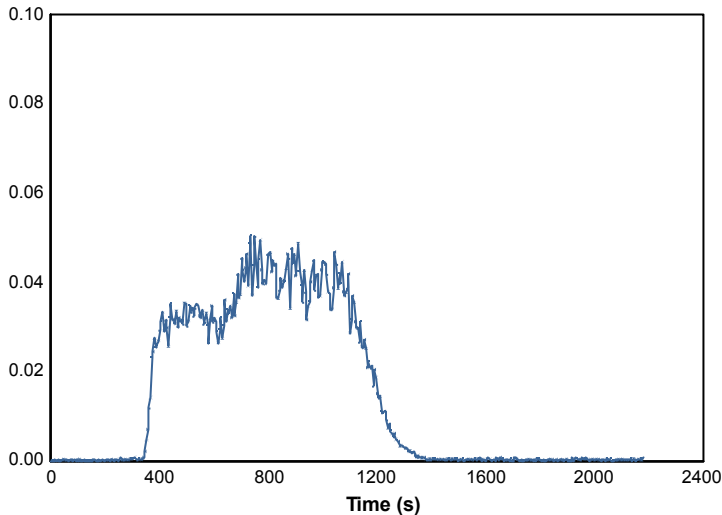
Heat release rate (kW/m<sup>2</sup>)



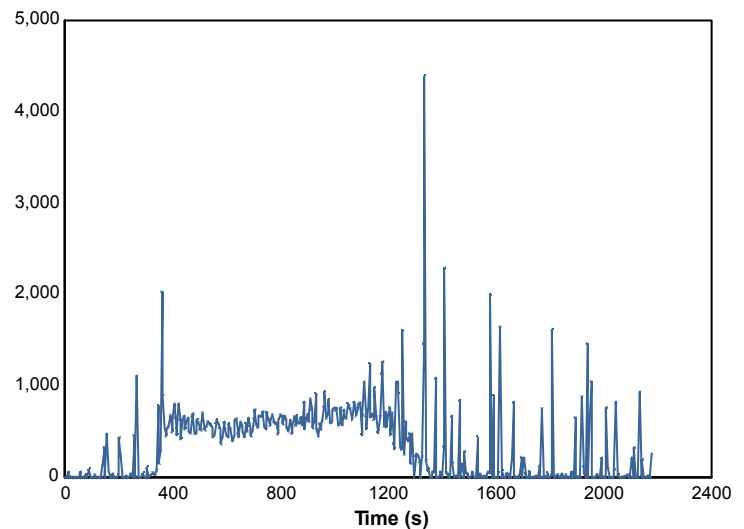
Effective heat of combustion (MJ/kg)



Smoke production rate ([m<sup>2</sup>/s])



Specific extinction area (m<sup>2</sup>/kg)



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Page 5 of 8

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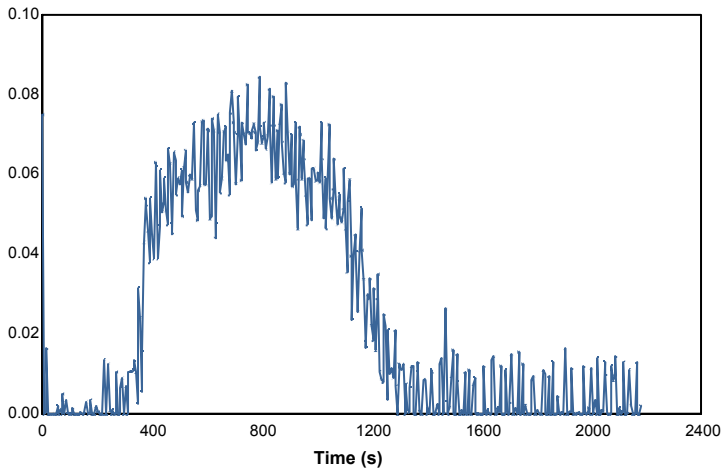
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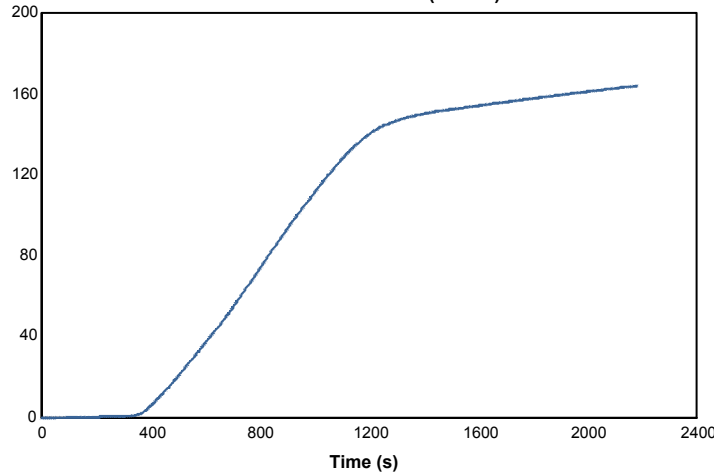
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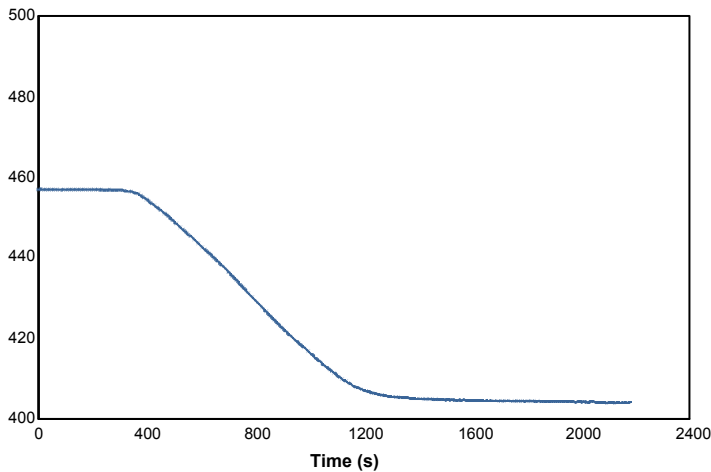
Mass loss rate (g/s)



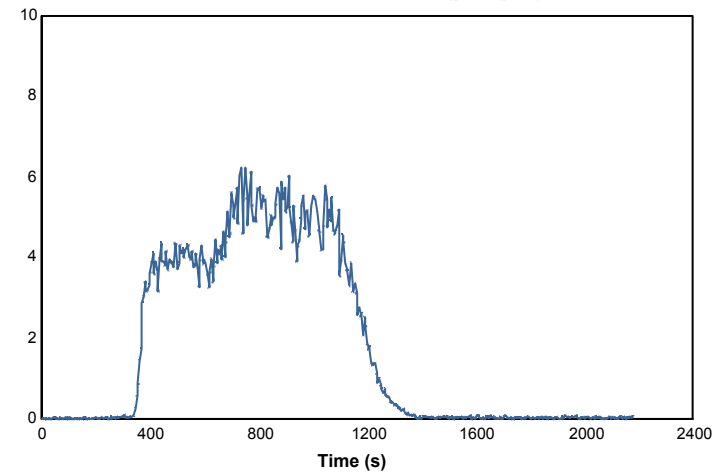
Total heat released (MJ/m<sup>2</sup>)



Mass (g)



Rate of smoke release ([m<sup>2</sup>/s]/m<sup>2</sup>)



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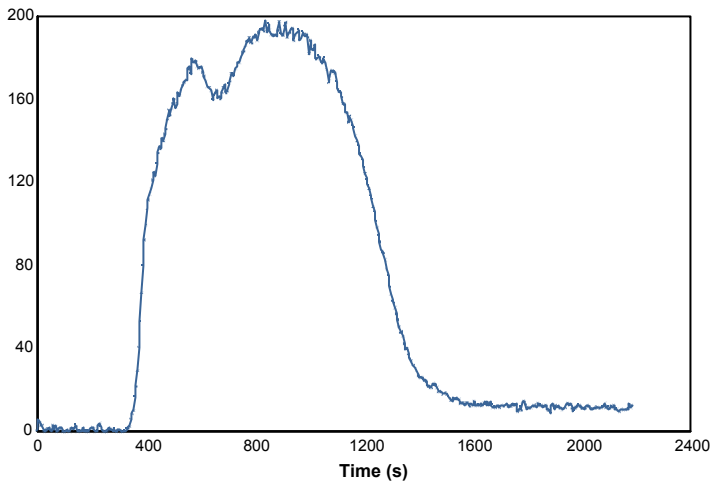
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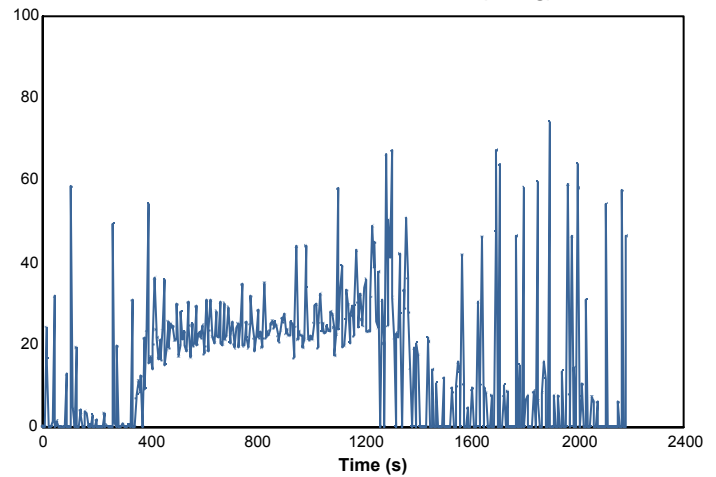
**Test Number :** 19-001335  
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**Specimen :** 3

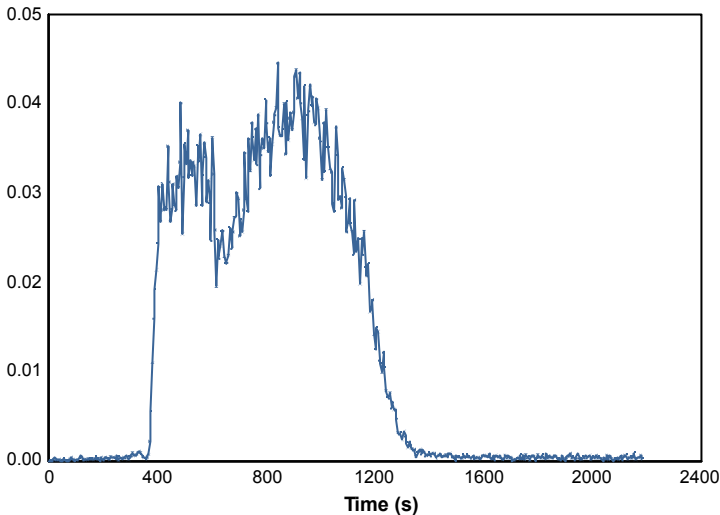
Heat release rate (kW/m<sup>2</sup>)



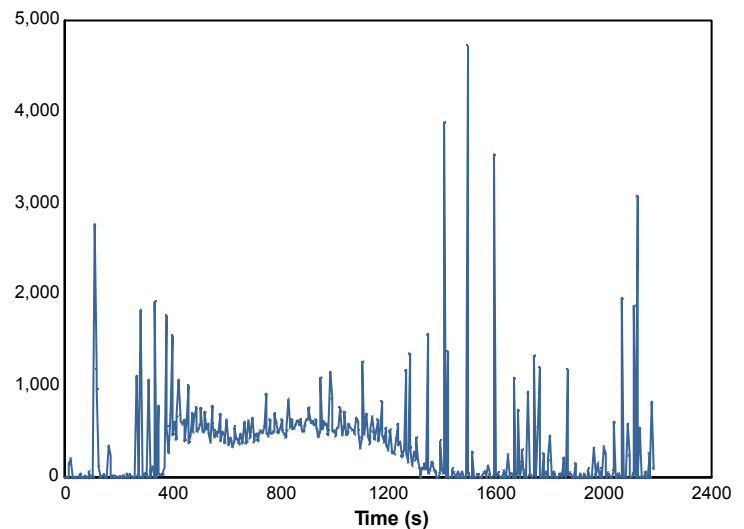
Effective heat of combustion (MJ/kg)



Smoke production rate ([m<sup>2</sup>/s])



Specific extinction area (m<sup>2</sup>/kg)



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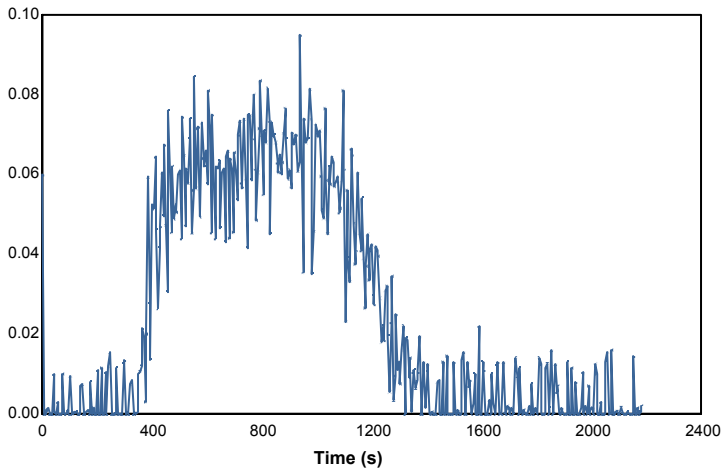
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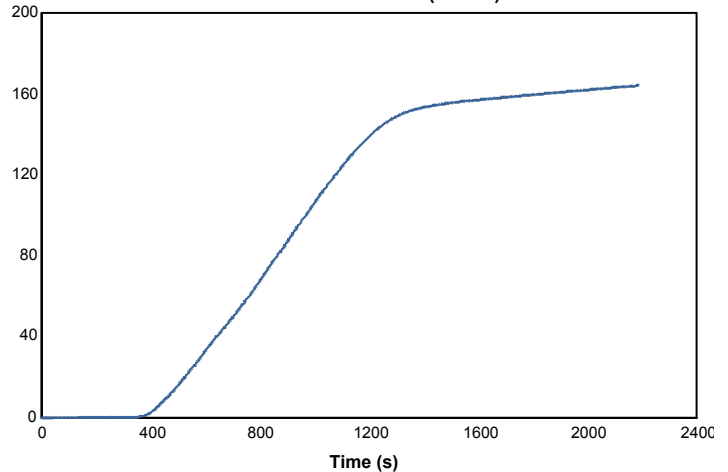
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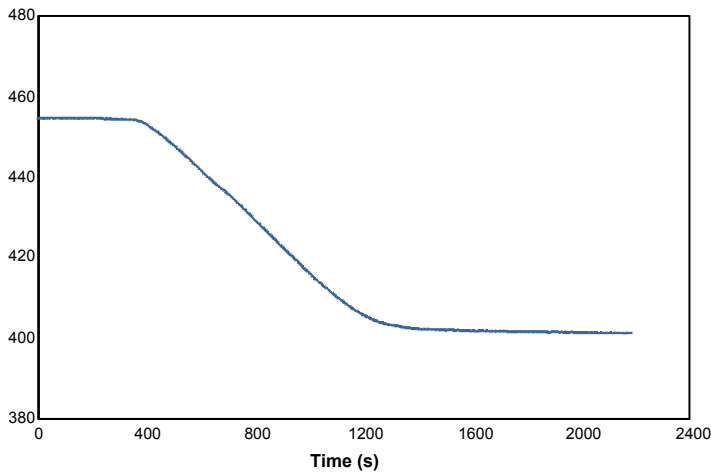
Mass loss rate (g/s)



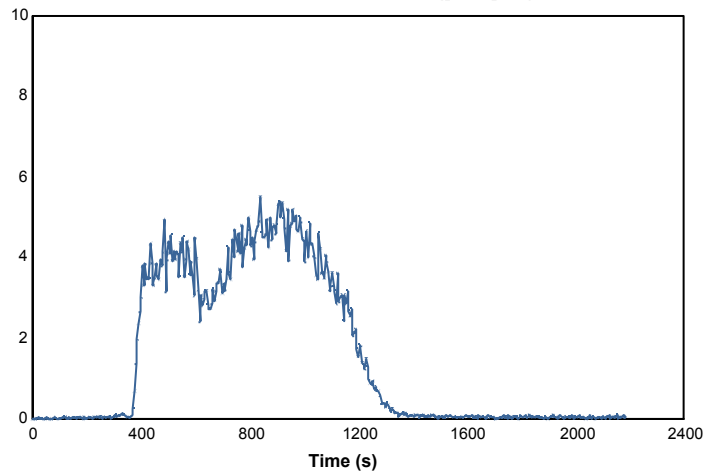
Total heat released (MJ/m²)



Mass (g)



Rate of smoke release ([m²/s]/m²)



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