



CERTIFICATE

Material Fire Test Certificate

IGNL-6200-07C I01 R00

DATE OF TEST 22.08.2022
ISSUE DATE 25.08.2022
EXPIRY DATE 24.08.2027

AS/NZS 3837:1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter

SPONSOR
Inapod Pty Ltd
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Tranmere, SA 5073

TEST BODY
Ignis Labs Pty Ltd
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3 Cooper Place
Queanbeyan NSW 2620
Australia
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(02) 6111 2909
Test body is the test location



Specimen Identification

Inapod Acoustic Office Pods

Specimen Description

The sponsor described the test specimens as acoustic office pods. No information as to the composition was provided.

The received specimens appear to be a plastic-based foam with felt top layer. They are mottled dark grey in colour and have a measured nominal thickness of approximately 9 mm and a measured nominal density of 0.25 g/cm³. The corners of the specimens are slightly rounded.

Ignis Labs was not responsible for the sampling stage. All specimens were sampled and fabricated by the test sponsor. The test results apply to the specimens as received.

Test Method

Three (3) specimens were tested in accordance with the requirements of AS/NZS 3837. Prior to the test, the specimens were conditioned at an ambient temperature of 23 ± 2 °C and a relative humidity 50 ± 5 %. The non-adhesive face of the specimen was tested. The test was performed with horizontal specimens with an incident radiation of 50 kW/m². The test was conducted with a wire mesh over the specimen face.

Observations

All specimens exhibited similar behaviour during the test. The felt top layer separated instantly from the foam prior to ignition and melted. The surface of the specimen began smoking and bubbling approximately seven seconds into the test and the specimens ignited between 19 and 48 seconds into the test. After ignition, the material expanded, with ignition continuing for approximately six minutes.

After the test, the specimens had lost the majority of their mass and were charred, with a surface layer of white ash.

Input

Test Heat Flux (kW/m ²)		50.0						
		Sp 1	Sp 2	Sp 3	Sp 4	Sp 5	Sp 6	Mean
Thickness (mm)		8.72	8.65	8.70	-	-	-	8.69
Surface Area (m ²)	A _s	0.00884	0.00884	0.00884	-	-	-	0.00884
Mass Before the Test (g)	m _i	22.10	21.50	22.60	-	-	-	22.07
Mass After the Test (g)	m _f	1.60	1.70	1.50	-	-	-	1.60
Time to Ignition (sec)	t _{ig}	46	48	19	-	-	-	37.67
Test Start Time (sec)	t _{start}	0	0	0	-	-	-	0

Calculation

Density (kg/m ³)	ρ	253.26	249.38	261.12	-	-	-	254.58
Irradiance (kW/m ²)		50	50	50	-	-	-	50
Exhaust System Flow Rate (m ³ /sec)		0.024	0.024	0.024	-	-	-	0.024
Mass Loss (kg/m ²)		2.32	2.24	2.39	-	-	-	2.32
Average Rate of Mass Loss (g/m ² ·s)		5.34	4.61	4.89	-	-	-	4.95
Total Mass Pyrolyzed (%)		92.76	92.09	93.36	-	-	-	92.74
Time to 50kW/m ² (sec)	t ₅₀	47.86	47.10	16.90	-	-	-	37.29
Ignitability Index (1/min)	I _{ig}	1.25	1.27	3.55	-	-	-	2.03
Test Duration (sec)		480	534	507	-	-	-	507.0

Peak Rate of Heat Release(0-60s)		243.40	348.18	366.46	-	-	-	319.35
Peak Rate of Heat Release(0-180s)		243.40	348.18	366.46	-	-	-	319.35
Peak Rate of Heat Release(0-300s)		243.40	348.18	366.46	-	-	-	319.35
Average Rate of Heat Release(0-60s)		193.47	284.82	246.19	-	-	-	241.49
Average Rate of Heat Release(0-180s)		166.71	163.16	170.70	-	-	-	166.86
Average Rate of Heat Release(0-300s)		109.89	111.62	116.93	-	-	-	112.81
Total Heat Released (MJ/m ²)		35.04	38.03	40.62	-	-	-	37.90
Average Effective Heat of Combustion (MJ/kg)	Δh _{c,eff(avg)}	15.05	16.96	17.00	-	-	-	16.34
Average specific Extinction Area (m ² /kg)	Σ _(avg)	239.65	216.60	195.40	-	-	-	217.22

Test Supervisor
Darren Laker

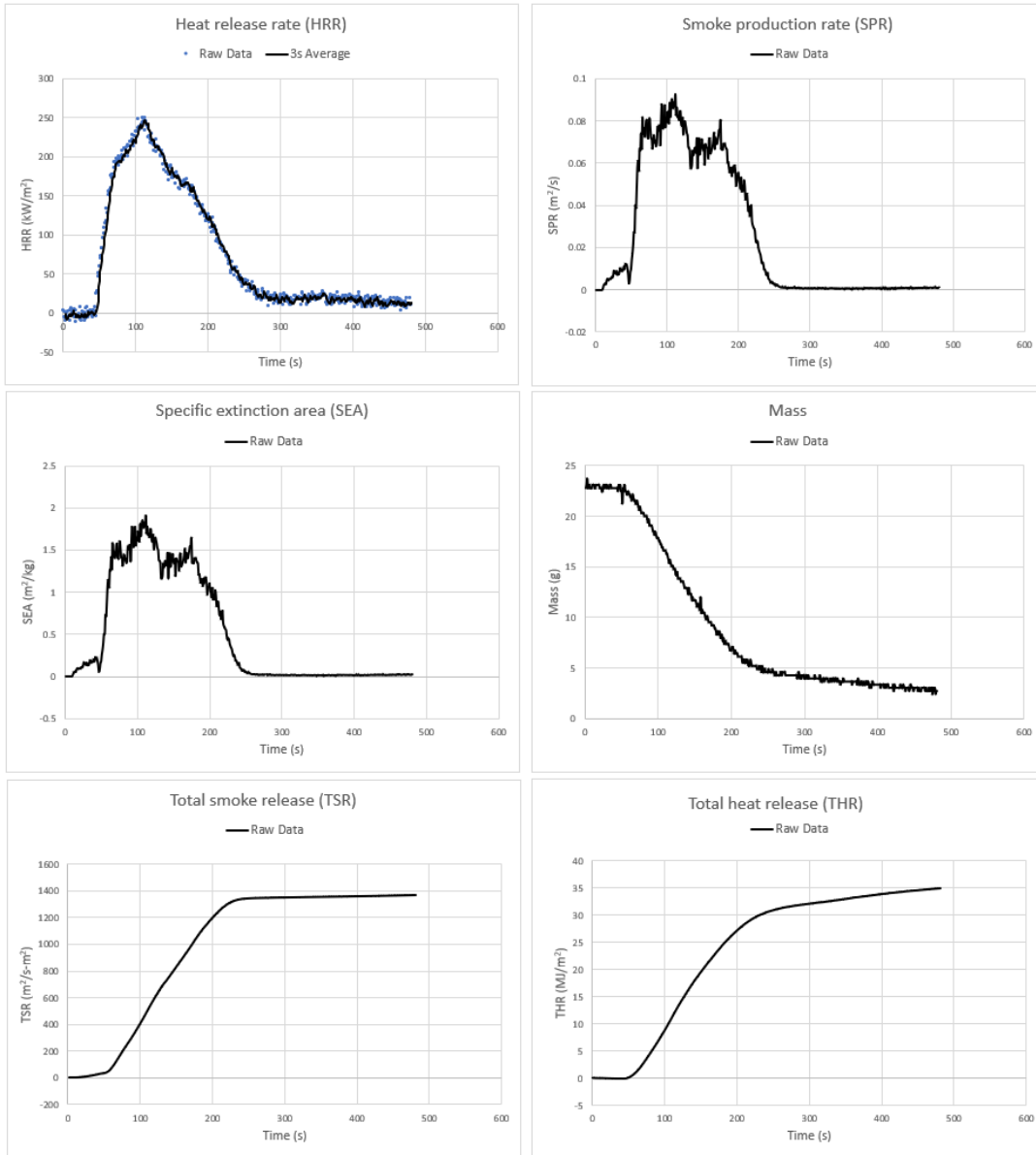
Technical Lead
Jessica Ying

Version: IGNL-QF-050-Issue 03 Revision 00

Disclaimer These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test, and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use. The results of these fire tests may be used to directly assess fire hazard, but it should be recognized that a single test method will not provide a full assessment of fire hazard under all fire conditions. The information contained in this document is provided for the sole use of the recipient and no reliance should be placed on the information by any other person. In the event that the information is disclosed or furnished to any other person, the Ignis Labs Pty Ltd accepts no liability for any loss or damage incurred by that person whatsoever as a result of using the information.

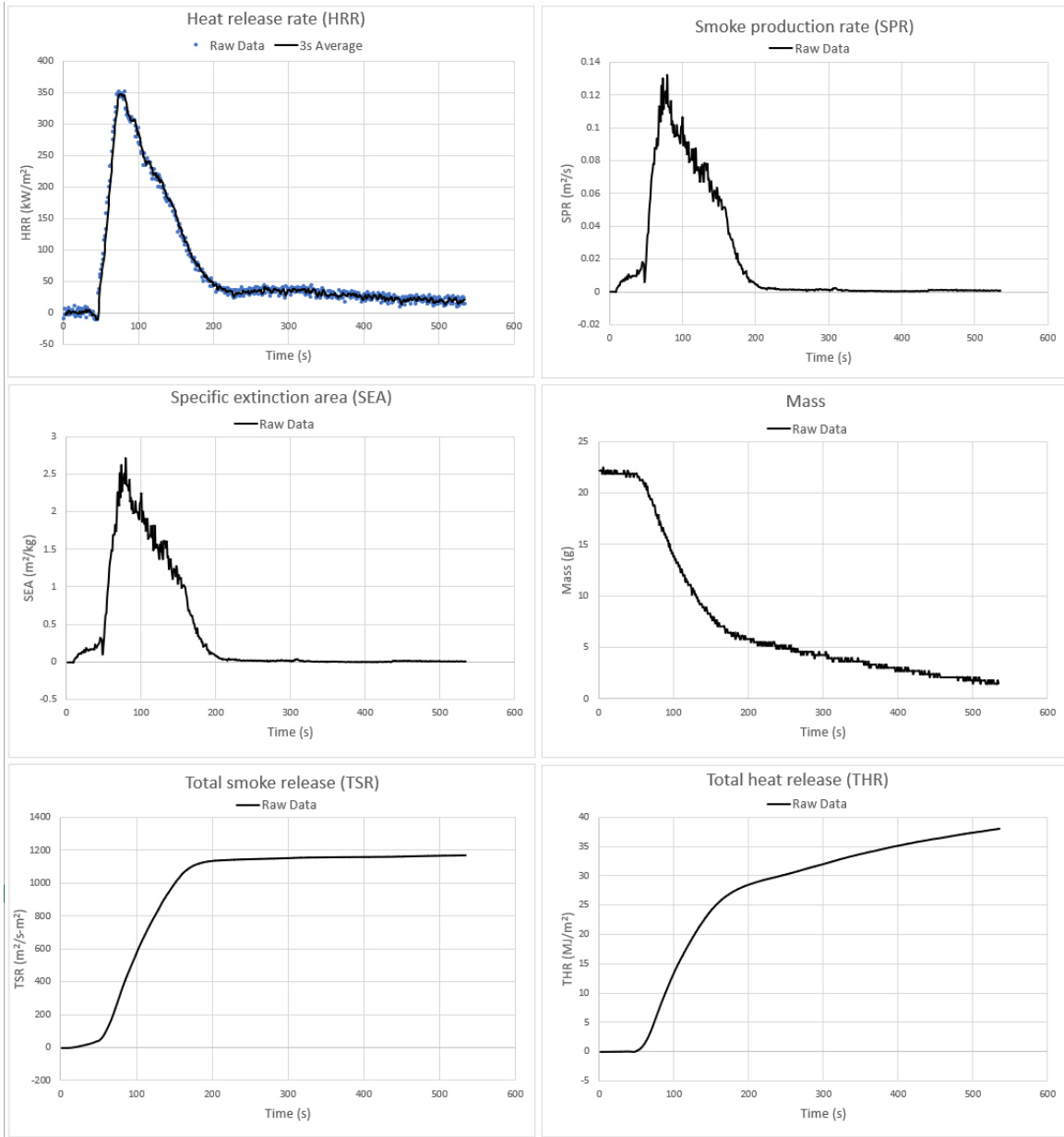
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SPECIMEN 1 GRAPHS



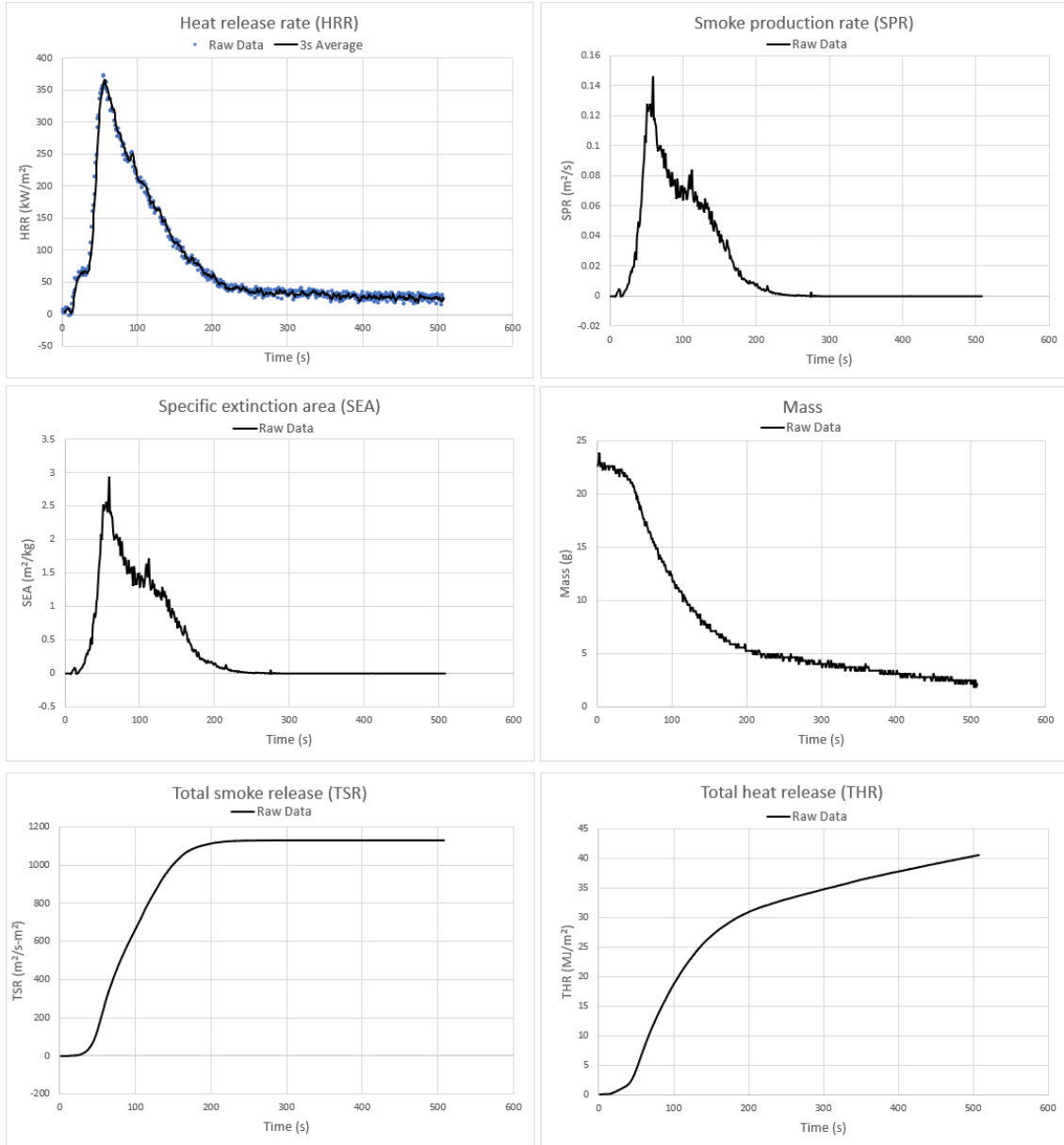
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SPECIMEN 2 GRAPHS



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SPECIMEN 3 GRAPHS



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END OF TEST CERTIFICATE