

AWTA PRODUCT TESTING

Australian Wool Testing Authority Ltd - trading as AWTA Product Testing
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TEST REPORT

CLIENT : GAT TECHNOLOGIES P/LTD 15 - 21 AITKEN STREET WILLIAMSTOWN VIC 3016		TEST NUMBER : 7-589900-CV ISSUE DATE : 25/03/2013 PRINT DATE : 26/03/2013			
SAMPLE DESCRIPTION		Clients Ref: "Traffic Patterns" Textured wall cladding Nom Composition: PVDF Thermoplastic backing Approximate mass: 900 g/m2 Nominal thickness: 0.75mm End Use: Commercial Wall Covering			
AS/NZS 3837:1998		Method of Test for Heat and Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter			
Results:-					
		Specimen			
		1	2	3	Mean
Average Heat Release Rate		50.2	47.1	47.4	48.2 kW/m2
Average Specific extinction area (according to Specification C1.10 of the Building Code of Australia)		117.3	123.0	123.6	121.3 m2/kg
Test orientation: Horizontal					
		Specimen			
		1	2	3	Mean
Irradiance		50	50	50	50 kW/m2
Exhaust flow rate		24	24	24	24 l/s
Time to sustained flaming		15	19	22	19 s
Test duration		465	555	500	507 s
Heat release rate curve on the 9 attached sheets which form part of this report					
Peak heat release after ignition		67.5	72.2	68.7	69.5 kW/m2
Average heat at 60s		40.0	48.9	43.0	44.3 kW/m2
Release rate at 180s		54.1	58.8	51.5	54.8 kW/m2
After ignition at 300s		57.5	59.2	56.3	57.7 kW/m2
Total heat released		22.6	25.2	22.5	23.4 MJ/m2
Average effective heat of combustion		9.6	10.9	9.6	10.0 MJ/kg
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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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 MICHAEL A. JACKSON B.Sc (Hons)
 MANAGING DIRECTOR

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 WILLIAMSTOWN VIC 3016

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Initial thickness	5.0	5.0	5.0	5.0	mm
Initial mass	78.3	77.9	78.3	78.2	g
Mass remaining	59.1	58.9	59.3	59.1	g
Mass percentage pyrolysed	24.5	24.4	24.3	24.4	%
Mass loss	19.2	19.0	19.0	19.1	g
Average rate of mass loss	5.2	4.3	4.3	4.8	g/m2.s

The formulae given in the Building Code of Australia have been shown to give inaccuracies in determination of Group Number for certain materials. Due to this AWTA Product Testing no longer reports Group Numbers. The formulae for calculation of Group Number is available from the website of the Australian Building Codes Board. Group Number calculation based on the results described in this report can be undertaken at the clients discretion

Samples were tested as assembled and supplied by client

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 the assessment of performance under real fire conditions

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

Classification of Fire Performance of Wall and Ceiling Lining Materials

Using the Method of Kokkala, Thomas and Karlsson

Reference: Kokkala, M.A. Thomas, P.H. and Karlsson, B. Rate of Heat Release and Ignitability Indices for Surface Linings. Fire and Materials Vol 17, 209-216 (1993)

Instructions: User input areas are those shaded in light-blue. Before entering or pasting new data into the two columns, it is best to clear any existing data by clicking on the 'Clear Data' button. If necessary, formatting of the cells can be restored by clicking on the 'Formatting' button. **Copy data from column U (time) of the csv file and paste into the time column. Copy data from column I (HRR) of the csv file and paste into the Rate of Heat Release column.**

Material Identification/Description:

Korogard Traffic Patterns Specimen 1

Clear Data

Formatting

INPUT DATA BELOW	
Data from AS/NZS 3837:1998	
Test Heat Flux = 50 kW/m ²	
Time (sec)	Rate of Heat Release (kW/m ²)
0	1.02771
3	0.48729
6	0.362604
9	0.297329
12	0.297861
15	2.65431
18	15.2482
21	31.7024
24	41.7662
27	47.4875
30	49.9703
33	52.1227
36	54.4749
39	54.4362
42	50.0104
45	43.8699
48	38.9594
51	35.7205
54	35.3665
57	36.6541
60	39.3808
63	40.4122
66	40.6472
69	41.3699
72	43.3549
75	45.7455
78	48.7789
81	50.8173
84	51.6995
87	53.8342
90	56.042
93	57.0164
96	57.9124
99	59.4922
102	59.1231

Time to Ignition (sec) =	30.0
Ignitability Index (1/min) =	1.997
End of Test (sec) =	465
Rate of Heat Release Index (m=0.34) =	4307.9
10 minute limit =	5721
Rate of Heat Release Index (m=0.93) =	1102.9
2 minute limit =	2145
12 minute limit =	1320

THE BCA CLASSIFICATION GROUP IS:

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Group 1

This method assumes that no materials lead to flashover after 12 and before 20 minutes.
Materials that are predicted not to flashover within 12 minutes are put into Group 1.

Classification of Fire Performance of Wall and Ceiling Lining Materials

Using the Method of Kokkala, Thomas and Karlsson

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Material Identification/Description:

Korogard Traffic Patterns Specimen 2

Clear Data

Formatting

INPUT DATA BELOW	
Data from AS/NZS 3837:1998	
Test Heat Flux = 50 kW/m ²	
Time (sec)	Rate of Heat Release (kW/m ²)
0	0.116738
3	2.17711
6	3.6999
9	2.81079
12	2.63192
15	3.13411
18	4.37075
21	7.59543
24	18.3908
27	32.2343
30	44.0839
33	49.4503
36	48.6856
39	45.9462
42	47.2596
45	52.5392
48	58.2588
51	61.8771
54	63.3047
57	61.3068
60	57.1338
63	52.9326
66	50.8757
69	50.1789
72	49.6447
75	49.9445
78	52.4988
81	56.7236
84	60.8656
87	63.6426
90	65.2733
93	66.624
96	67.5926
99	66.8621
102	66.5265

Time to Ignition (sec) =	43.6
Ignitability Index (1/min) =	1.378
End of Test (sec) =	555
Rate of Heat Release Index (m=0.34) =	4730.1
10 minute limit =	6056
Rate of Heat Release Index (m=0.93) =	1151.6
2 minute limit =	2248
12 minute limit =	1423

THE BCA CLASSIFICATION GROUP IS:

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Group 1

This method assumes that no materials lead to flashover after 12 and before 20 minutes. Materials that are predicted not to flashover within 12 minutes are put into Group 1.

Classification of Fire Performance of Wall and Ceiling Lining Materials

Using the Method of Kokkala, Thomas and Karlsson

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Material Identification/Description:

Korogard Traffic Patterns Specimen 3

Clear Data

Formatting

INPUT DATA BELOW	
Data from AS/NZS 3837:1998	
Test Heat Flux = 50 kW/m ²	
Time (sec)	Rate of Heat Release (kW/m ²)
0	0
3	0
6	0
9	0
12	0
15	1.27041
18	2.2809
21	2.41798
24	5.91946
27	16.1289
30	28.595
33	38.9345
36	45.9036
39	53.0736
42	58.7475
45	62.213
48	64.502
51	64.8549
54	64.486
57	60.6416
60	52.305
63	42.4275
66	36.6041
69	31.7834
72	28.5395
75	27.9272
78	29.5252
81	32.2174
84	34.5242
87	37.4135
90	40.8971
93	43.5971
96	44.9616
99	46.984
102	50.2828

Time to Ignition (sec) =	37.7
Ignitability Index (1/min) =	1.591
End of Test (sec) =	519
Rate of Heat Release Index (m=0.34) =	4380.0
10 minute limit =	5941
Rate of Heat Release Index (m=0.93) =	1123.6
2 minute limit =	2212
12 minute limit =	1387

THE BCA CLASSIFICATION GROUP IS:

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Group 1

This method assumes that no materials lead to flashover after 12 and before 20 minutes. Materials that are predicted not to flashover within 12 minutes are put into Group 1.