



CERTIFICATE

Material Fire Test Certificate

IGNL-3230-00-07 101 R00
 Date of Test 04-Oct-19
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 EXPIRY 04-Oct-24

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

PRESENTED TO
 Network Architectural

71 Marigold Street
 REVESBY NSW 2212
 (02) 8316 5000

TEST BODY

Ignis Labs Pty Ltd
 ABN 36 620 256 617
 PO Box 5174
 Braddon ACT 2612
www.ignislabs.com.au
 (02) 6111 2909

Specimen Identification

Prodema ProdEx IGN

Specimen Description

The sponsor described the tested specimen as:

The Prodema panel is a High-Pressure Composite (HPL) Core (Bakelite) clad in a veneer of natural wood with a surface treated with synthetic resin and an exterior PVDF film.

Test Method

Three (3) specimens were tested in accordance with the requirements of AS/NZS 3837

Observations

The protective coating on specimen 1 and 3 reacted different to specimen 5 and 6. Specimen 1 and 3 coating deteriorated earlier exposing the timber veneer resulting in a higher Average Specific Extinction Area.

Input

Test Heat Flux (kW/m ²)	50.0							
		Sp 1	Sp 2	Sp 3	Sp 4	Sp 5	Sp 6	Mean
Thickness (mm)		7.87	-	7.86	-	7.91	7.88	7.88
Surface Area (m ²)	A _s	0.00884	-	0.0088	-	0.00884	0.0088	0.00884
Mass before the Test (g)	m _i	112.439	-	112.7	-	114.271	115.12	113.63
Mass after the Test (g)	m _f	86.9578	-	89.121	-	90.1506	91.996	89.5565
Time to Ignition (sec)	t _{ig}	32	-	32	-	31	29	31
Test start time (sec)	t _{start}	0	-	0	-	0	0	0

Calculation

Density (kg/m ³)	ρ	1616.18	-	1621.9	-	1634.21	1652.6	1631.22	
Irradiance (kW/m ²)		49.75	-	49.75	-	49.75	49.75	49.75	
Exhaust System Flow Rate (m ³ /sec)		0.024	-	0.024	-	0.024	0.024	0.024	
Mass Loss (kg/m ²)		2.88248	-	2.6668	-	2.7286	2.6153	2.72329	
Average rate of Mass Loss per unit area (g/m ² .s)		9.57636	-	10.296	-	10.4946	10.989	10.339	
Total Mass Pyrolyzed (%)		22.6622	-	20.918	-	21.1084	20.084	21.1931	
Time to 50kW/m ² (sec)	t ₅₀	28.0381	-	28.187	-	28.634	26.33	27.7972	
Ignitability Index (1/min)	I _{ig}	60/(t ₅₀ -t _{st})	2.13995	-	2.1287	-	2.09541	2.2788	2.1607
Test duration (sec)			333	-	291	-	291	267	295.5

Peak Rate of Heat Release (0-60s)		124.685	-	141.94	-	138.28	128.07	133.243
Peak Rate of Heat Release (0-180s)		124.685	-	141.94	-	138.28	128.07	133.243
Peak Rate of Heat Release (0-300s)		124.685	-	141.94	-	138.28	128.07	133.243
Average Rate of Heat Release (0-60s)		114.725	-	124.87	-	131.005	105.82	119.106
Average Rate of Heat Release (0-180s)		69.3194	-	69.941	-	73.8706	51.455	66.1465
Average Rate of Heat Release (0-300s)		45.5077	-	49.933	-	59.0037	42.618	49.2657
Total Heat Released (MJ/m ²)		14.5163	-	13.712	-	16.2556	1.3719	11.4638
Average Effective Heat of Combustion (MJ/kg)	Δh _{c,eff(avg)}	4.99239	-	5.1374	-	5.93902	457.66	118.433
Average Specific Extinction Area (m ² /kg)	σ _{f(avg)}	198.934	-	191.06	-	24.6636	31.926	111.646

Rate of Heat Release Index (m=0.34)	I _{Q1}	3765.13	-	3799.4	-	4158.54	3092	3703.78	
Rate of Heat Release Index (m=0.93)	I _{Q2}	545.891	-	602.53	-	624.99	623.63	599.261	
Integral Limit at 10 min	I _{Q, 10 min}	6800 - 540 I _Q	5644.43	-	5650.5	-	5668.48	5569.5	5633.22
Integral Limit at 2 min	I _{Q, 2 min}	2475 - 165 I _Q	2121.91	-	2123.8	-	2129.26	2099	2118.49
Integral Limit at 12 min	I _{Q, 12 min}	1650 - 165 I _Q	1296.91	-	1298.8	-	1304.26	1274	1293.49

Result

BCA Group Classification Prediction	1	-	1	-	1	1
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Benjamin Hughes-Brown FIE(Aust) CPEng NER APEC Engineer IntPE(Aust)

Chartered Professional Engineer
 CPEng, NER (Fire Safety) Lic No 12590091, RPEQ11498, BPB-C10-1875, EF-38394,
 MFireSafety (UWS), LicEng (UTS), GradDipBushFire (UWS), DipEngPrac (UTS), DipEng (CIT)

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