Test Report

EKOLOGIX AUSTRALIA PTY LTD

UNIT 1, 20-26 SABRE DRIVE, PORT MELBOURNE, VICTORIA, AUSTRALIA 3207

Sample Name: EKODECK CASTELLATED PANEL

SGS Ref No.: NJIN2306000770PL02

Spec.: 219H26

Material and Mark: WOOD PLASTIC COMPOSITE

The above sample(s) was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion arising therefrom. Results apply to the sample as received.

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Test Requested:

1. AS/NZS 1530.3:1999 Methods for fire tests on building materials, components and structures Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release.
2. AS ISO 9239.1-2003(R2016) Reaction to fire tests for floorings —Part 1: Determination of the burning behaviour using a radiant heat source.

Test Results: -- See attached sheet --

Test Period:

Sample Receiving Date	:	JUN.13, 2023
Test Performing Date	:	JUN.13, 2023 TO JUN.27, 2023

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Anji Branch

Echo Li
Approved Signatory

SGS-CSTC Standards Technical Services Co., Ltd. Anji Branch Fire Technology Service

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1. AS/NZS 1530.3:1999

I. Test conducted

This test was performed in accordance with AS/NZS 1530.3:1999 Methods for fire tests on building materials, components and structures Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release.

II. Sample details

Description	Ekodeck Castellated Panel (provided by client)
Color	Brown
Thickness	26.5 mm
Density	13.7 kg/m^2
Specimen size	600mm×450mm
Test surface	Marking surface

	Temperature (℃)	Humidity (%)	Duration (d)
Conditioning	20±2℃	65±5%	7

Note: The specimens shall be conditioned to constant mass (see ISO 291).

Mounting or fixing method for test sample:

Using fibre-reinforced cement board as substrate, hold the sample and substrate against the specimen support frame by using the specimen clamping ring. No joint in the specimens.

III. Test results

The mean values and standard errors:

Items		Mean value	Standard error
Ignition Time, (min)		NI	NA
Flame propagation time, (s)		NA	NA
Heat release integral, (Kj/m^2)		NA	NA
Maximum optical density, D (m^{-1})	Ignition specimen	---	---
	Non-ignition specimen	0.9611	0.0042
Smoke release, lg D	Ignition specimen	---	---
	Non-ignition specimen	-0.0172	0.0019

Note: NI—Not ignition; NA—Not applicable

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Note:

1) Where all specimens do not ignite, means and standard errors for smoke release shall be reported separately for those specimens that ignite and those that do not ignite. The higher of the two values shall be reported as the smoke released for the material or component.

2) Where all specimens do not ignite, indices for smoke developed shall be reported separately for those specimens that ignite and those specimens that do not ignite. The higher of the two values shall be reported as the smoke developed index for the product.

Regulatory Indices:

Items	Regulatory Indices
Ignitability index (Range 0 to 20)	0
Spread of flame index (Range 0 to10)	0
Heat evolved index (Range 0 to 10)	0
Smoke developed index (Range 0 to 10)	7

Supplementary Observations:

(a) Number of specimens tested: 6

(b) The number of specimens that ignite: No

(c) Where flashing was encountered, and ignition was based on a 10-second flash: No

(d) The number of specimens did emit a radiation intensity rise of 1.4Kw/m^2: No

(e) Any observations of associated phenomena: No

(f) Others: No

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Table 1 Indices for spread of flame

1.33 x mean flame propagation time, s		Index
≥270		0
≥240	＜270	1
≥210	＜240	2
≥180	＜210	3
≥150	＜180	4
≥120	＜150	5
≥90	＜120	6
≥60	＜90	7
≥30	＜60	8
≥10	＜30	9
	＜10	10

Table 2 Indices for heat evolved

Mean value of the integral from the radiation intensity curves Kj/m^2		Index
	＜25	0
≥25	＜50	1
≥50	＜75	2
≥75	＜100	3
≥100	＜125	4
≥125	＜150	5
≥150	＜175	6
≥175	＜200	7
≥200	＜225	8
≥225	＜250	9
≥250		10

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Table 3 Indices for smoke developed

Mean optical density, m^{-1}				Index
Expressed in terms of K*		Expressed numerically		
	＜K		＜0.0082	0†
≥K	＜2K	≥0.0082	＜0.0164	1
≥2K	＜2^2K	≥0.0164	＜0.0328	2
≥2^2K	＜2^3K	≥0.0328	＜0.0656	3
≥2^3K	＜2^4K	≥0.0656	＜0.131	4
≥2^4K	＜2^5K	≥0.131	＜0.262	5
≥2^5K	＜2^6K	≥0.262	＜0.525	6
≥2^6K	＜2^7K	≥0.525	＜1.05	7
≥2^7K	＜2^8K	≥1.05	＜2.10	8
≥2^8K	＜2^9K	≥2.10	＜4.20	9
≥2^9K		≥4.20		10

* Where K is a constant = 0.0082

† Where doubt exists in the resolving of optical density below 0.016 m^{-1} the index allotted should be ‘0 to 1’.

Statement:

1) The results only apply to the specimen mounted as described in this report.
2) The results of this fire test 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.

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2. AS ISO 9239.1-2003

I. Test conducted

This test was conducted as per AS ISO 9239.1-2003(R2016) Reaction to fire tests for floorings —Part 1: Determination of the burning behaviour using a radiant heat source.

II. Sample details

Sample description	Ekodeck Castellated Panel (provided by client)
Color	Brown
Thickness	26.5mm
Density	13.7 kg/m^2
Test surface	Marking surface
Specimen size	1050mm×230mm

Conditioning:

Prior to testing, the sample was conditioned to constant mass at temperatures of 23±2°C and at a relative humidity of 50±5% for at least 48 h, until constant mass is achieved.

Mounting of Test Assembly:

Fibre cement board, with its density approximate 1800kg/m^3, thickness approximate 9mm, is as the substrate. The test specimens are fixed mechanically to the substrate. No joint in the specimens.

III. Test results

Distance (mm)	S1	S2	S3
	Time (min:s)	Time (min:s)	Time (min:s)
50	05:06	05:12	05:23
100	05:19	05:40	06:18
150	06:12	06:08	07:16
200	07:06	06:16	07:38
250	07:48	07:41	08:29
300	10:05	10:16	11:49
350	11:13	11:08	12:36
400	11:41	12:06	13:07
450	13:38	14:16	15:28
500	15:18	16:22	17:49
550	21:38	22;18	20:16
600	22:36	23:46	23:33
650	25:16	26:18	26:06

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700	--	--	--
750	--	--	--
800	--	--	--
850	--	--	--
900	--	--	--
950	--	--	--
1000	--	--	--
Extinguishing time (min:s)	30:00	30:00	30:00
The final maximum flame spread distance (mm)	680	650	660

	S1	S2	S3	Average
Flame front distance at 10 min (mm)	290	290	280	287
Flame front distance at 20 min (mm)	530	530	520	527
Flame front distance at 30 min (mm)	680	650	660	663
Heat Flux at 10 minutes, HF-10 (kW/m^2)	7.6	7.6	7.8	7.7
Heat Flux at 20 minutes, HF-20 (kW/m^2)	3.2	3.2	3.4	3.3
Heat Flux at 30 minutes, HF-30 (kW/m^2)	2.0	2.0	2.2	2.1
The integral of the smoke (%×min)	19.8	20.3	21.6	20.6
Max. light attenuation (%)	128.8	130.6	126.7	128.7

Summary of results:

	S1	S2	S3	Average
CHF	2.0	2.0	2.2	2.1

Statement:

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

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Photo Appendix:



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End of Report

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