Test Report No. 7191290258-MEC22/4-CK
dated 14 Nov 2022

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SUBJECT:

Determination of the toxic fume generated by core material of Brand: 'Woven Image' Model: 'Fuji Collection' PET material submitted by Woven Image Pty Ltd on 01 August 2022.

TESTED FOR:

Woven Image Pty Ltd
37-39 Chard Road
Brookvale NSW 2100
Australia

DATE OF TEST:

03 Nov 2022

PURPOSE OF TEST:

To determine the toxic fume generated from materials or products of thickness not exceeding 25.4mm when mounted in the horizontal position and tested in according to test method references T11.01 of BS EN 45545-2 : 2020.

This test was conducted in accordance with the procedures specified in BS EN 45545-2 : 2020 and using the apparatus and procedures specified in ISO 5659-2 : 2017.

The test was conducted at TÜV SÜD PSB fire test laboratory located at No. 10 Tuas Avenue 10, Singapore 639134.

TÜV SÜD PSB

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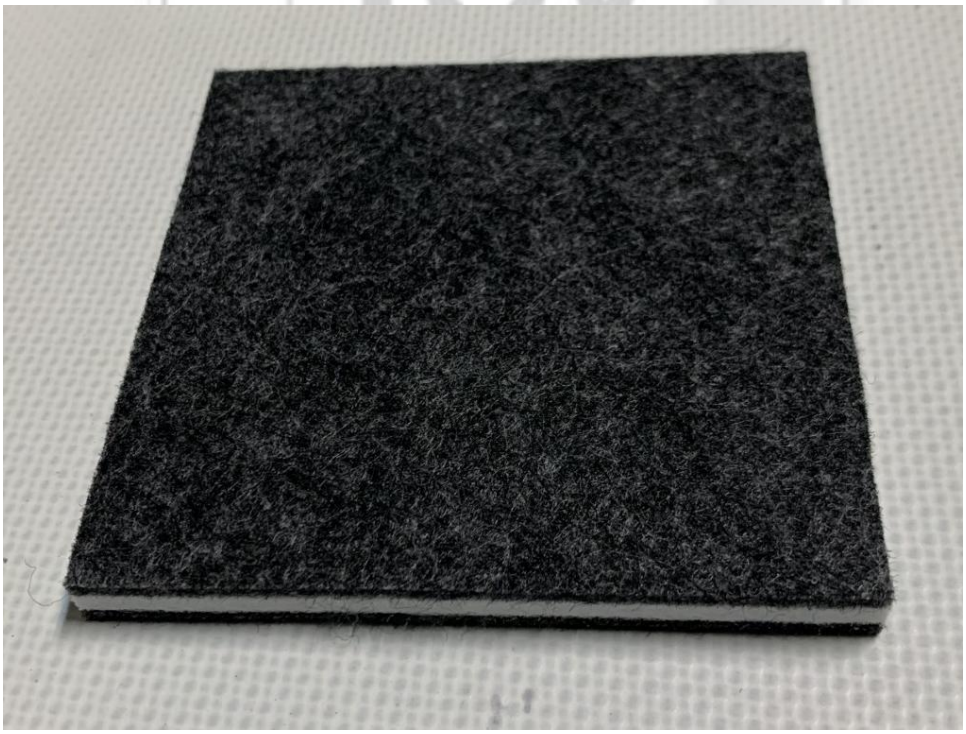
DESCRIPTION OF SAMPLES:

Six pieces of specimen, said to be core material of Brand: 'Woven Image' Model: 'Fuji Collection' PET material each of nominal size 75mm x 75mm x 6.75mm thick were received. The area and bulk density of the specimen were measured to be 1.70 kg/m^2 and 251.3 kg/m^3 respectively.

Details of the product, as provided by the sponsor of test, are as follows:

Brand	Woven Image
Model reference	Fuji Collection
Generic product name	Fuji Collection
Material composition	100% PET (64% recycled)
Country of origin	Australia
Nominal bulk density	1.70 kg/m^2
Nominal thickness	6mm±2mm
Fire retardant	N.A.

Photograph of specimen:



Details of the product, as provided by the sponsor of test, are as follows: (cont'd)

Exterior face #1 (fire side):	
Brand –	Not provided by test sponsor
Material –	Mura, 100% PET (60% recycled)
Manufacturer –	Woven Image
Thickness –	1.9mm ± 0.25mm
Density –	350 gsm
Color reference –	#542 Charcoal
Name of flame retardant used –	N.A.
Exterior face #2 (non-fire side):	
Brand –	Not provided by test sponsor
Material –	Mura, 100% PET (60% recycled)
Manufacturer –	Woven Image
Thickness –	1.9mm ± 0.25mm
Density –	350 gsm
Color reference –	#542 Charcoal
Name of flame retardant used –	N.A.
Core material:	
Brand –	Not provided by test sponsor
Material –	Auto Panel 100% PET (70% recycled)
Manufacturer –	Not provided by test sponsor
Thickness –	3mm
Density –	1000 gsm
Color reference –	500 off white
Name of flame retardant used –	N.A.
Adhesive:	Between exterior face and base panel
Brand –	Scatter glue
Material –	Not provided by test sponsor
Manufacturer –	Not provided by test sponsor
Thickness –	Less than 1mm
Density –	20 gsm
Color reference –	Not provided by test sponsor
Name of flame retardant used –	N.A.

TEST PROCEDURES:

The test was conducted using the ISO 5659-2 smoke chamber (Asset No. 191010483) in conjunction with a FTIR Analyzer (Serial No. AFS-B2-C-1716) with their respective spreadsheets. Both systems, operating at the same time, were dedicated for the acquisition and analysis of opacity of the smoke and the qualitative and quantitative analysis of gases emitted during the test.

Prior to test, the specimens were prepared and conditioned in accordance to annex C.5 of BS EN 45545-2.

The test specimens were exposed to the specified test conditions according to Method T11.01 for the toxic fume for 10 minutes.

The gas data of the specimen were calculated according to annex C.9 and the CIT value was calculated according to annex C.16 of the standard.

TEST RESULTS:

Test Parameters	Specimen 1	Specimen 2	Specimen 3	Average
Time of ignition (sec)	-	-	-	-
Initial Mass (gm)	9.63	9.50	9.61	9.58
Final Mass (gm)	0.85	0.40	0.35	0.53
Mass Loss (gm)	8.77	9.09	9.26	9.04
Observations	1) Smoke emission started at 1 second of test for all specimens.			

The concentration of each gas sampled at 240s of test is as follows:

Gas		Specimen 1		Specimen 2		Specimen 3		Average	
		ppm	Kg/m^3	ppm	Kg/m^3	ppm	Kg/m^3	ppm	Kg/m^3
Carbon Dioxide (CO_2)		22469.87	0.04	20153.43	0.03	29334.44	0.05	23985.91	0.04
Carbon Monoxide (CO)		307.59	0.00	390.73	0.00	361.69	0.00	353.34	0.00
Nitrogen Oxide (NO_x)	NO	ND	ND	ND	ND	ND	ND	ND	ND
	NO2	ND	ND	ND	ND	ND	ND	ND	ND
Sulphur Dioxide (SO_2)		2.04	0.00	2.28	0.00	2.49	0.00	2.27	0.00
Hydrogen Chloride (HCl)		ND	ND	1.95	0.00	ND	ND	1.95	0.00
Hydrogen Bromide (HBr)		0.82	0.00	0.34	0.00	ND	ND	0.58	0.00
Hydrogen Fluoride (HF)		ND	ND	ND	ND	ND	ND	ND	ND
Hydrogen Cyanide (HCN)		ND	ND	ND	ND	ND	ND	ND	ND
CIT_G		0.03		0.02		0.05		0.03	

*ND – Not Detected

TEST RESULTS (cont'd):

The concentration of each gas sampled at 480s of test is as follows:

Gas		Specimen 1		Specimen 2		Specimen 3		Average	
		ppm	Kg/m^3	ppm	Kg/m^3	ppm	Kg/m^3	ppm	Kg/m^3
Carbon Dioxide (CO_2)		47879.70	0.08	27804.83	0.04	30129.69	0.05	35271.41	0.06
Carbon Monoxide (CO)		525.94	0.00	885.82	0.00	1040.66	0.00	817.47	0.00
Nitrogen Oxide (NO_x)	NO	ND	ND	ND	ND	ND	ND	ND	ND
	NO2	ND	ND	ND	ND	ND	ND	ND	ND
Sulphur Dioxide (SO_2)		3.43	0.00	3.48	0.00	7.83	0.00	4.91	0.00
Hydrogen Chloride (HCl)		0.90	0.00	1.85	0.00	1.41	0.00	1.39	0.00
Hydrogen Bromide (HBr)		0.06	0.00	0.12	0.00	ND	ND	0.09	0.00
Hydrogen Fluoride (HF)		2.73	0.00	ND	ND	ND	ND	2.73	0.00
Hydrogen Cyanide (HCN)		ND	ND	ND	ND	ND	ND	ND	ND
CIT_G		0.01		0.01		0.01		0.01	

*ND – Not Detected

CONCLUSION:

In accordance to test method references T11.01 of BS EN 45545-2 : 2020, the product, **Brand: 'Woven Image' Model: 'Fuji Collection' PET material**, achieved the following average values:

CIT_G at 240 sec : 0.03
CIT_G at 480 sec : 0.01

Note: A product meeting a requirement at the maximum testable thickness shall be considered to comply with the requirement at greater thicknesses according to clause 4.2e of BS EN 45545-2: 2020.

REMARKS:

The test results relate only to the behaviour of the test specimens of the product under the particular conditions of 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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Chan Lung Toa
Assistant Vice President
Fire Testing
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PSB Singapore

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Effective 26 January 2021