BRANZ Technical Opinion

FC12885-01-2

ASSESSMENT REPORT ON THE FIRE PERFORMANCE OF WOVEN IMAGE MURA AND ECHOPANEL®

CLIENT
Woven Image Pty Ltd
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Australia

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ASSESSMENT OBJECTIVE

This report gives BRANZ's assessment of the fire performance in accordance with the Building Code of Australia (NCC 2022 Volume One Specification S7C4, determined in accordance with AS 5637.1:2015) in respect to the fire performance of Woven Image Mura (1.9 mm), EchoPanel® 7 mm, EchoPanel® 9 mm and EchoPanel® 12 mm. All are 100% PET (60% recycled) polyester fibre wall panels of nominal thickness 1.9 mm, 7 mm, 9 mm, 12 mm, and weight 350 gsm, 1,400 gsm, 1,400 gsm, 2,400 gsm, respectively.

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CONCLUSION

It is considered that on the basis of the performance of Woven Image EchoPanel® 24 mm, 100% polyester fabric with 3,000 gsm weight as tested in BRANZ ISO room test FI 12432-001, that similar product of the same composition, lesser thickness and weight and therefore less potential heat release, known as Woven Image Mura (1.9 mm), EchoPanel® 7 mm, EchoPanel® 9 mm, and EchoPanel® 12 mm, polyester fibre wall panels with weight 350 gsm, 1,400 gsm, and 2,400 gsm are likely to achieve the same result if tested in accordance with AS ISO 9705:2003 (R 2016).

Building Code Document	Group Number Classification
NCC Volume One Specification C1.10 Clause 4 determined in accordance with AS 5637.1	1 The SMOGRA was not more than the 100 m^2/s^2 x 100 limit

LIMITATION

This report is subject to the accuracy and completeness of the information supplied.

BRANZ reserves the right to amend or withdraw this assessment if information becomes available which indicates the stated fire performance may not be achieved.

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ISSUE NO.	DATE ISSUED	DESCRIPTION	AUTHOR
01	02/06/2020	Initial Issue	L. F. Hersche
02	1 March 2024	Inclusion of Woven Image EchoPanel® 9 mm NCC reference updates	L. Q. Greive

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1. INTRODUCTION

This report gives the BRANZ assessment of the Group Number classification for the Woven Image products listed below:

- Woven Image Mura (1.9 mm)
- Woven Image EchoPanel® 7 mm
- Woven Image EchoPanel® 9 mm
- Woven Image EchoPanel® 12 mm

2. BACKGROUND

In BRANZ ISO room test FI 12432-001 the product submitted for testing by the client was identified by the client as Woven Image EchoPanel® 24 mm 100% PET (60% recycled) polyester fibre with thickness 24 mm and nominal weight of 3,000 gsm.

The polyester panel was adhered to nominally 6 mm fibre cement substrate with H.B. Fuller Max Bond Fast Grip around the perimeter of each panel and at vertical 200 mm centres.

The results of the test in accordance with AS ISO 9705 determined in accordance with AS 5637.1 are shown in Table 1.

Table 1: Test results in FI 12432-001

Building Code Document	Group Number Classification
NCC Volume One Specification C1.10 Clause 4 determined in accordance with AS 5637.1	1 The SMOGRA was not more than the 100 m^2/s^2 x 100 limit
NZBC Verification Method C/VM2 Appendix A	1-S Average Smoke Production Rate was less than the 5 m^2/s limit

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3. DISCUSSION

In addition to the tested product as reported above which is known as Woven Image EchoPanel® with thickness 24 mm and weight 3,000 gsm, the test result may also be applied to the following variation of the same product as listed below:

- Woven Image Mura (1. 9 mm)
- Woven Image EchoPanel® 7 mm
- Woven Image EchoPanel® 9 mm
- Woven Image EchoPanel® 12 mm

The physical parameters were provided by the client for Woven Image Mura (1.9 mm), EchoPanel® 7 mm, EchoPanel® 9 mm, and 12 mm thicknesses and are shown in Table 2.

Table 2: Physical properties of Woven Image Mura and EchoPanel®

Nominal Thickness (mm)	Weight (gsm)	Density (kg/m³)
1.9 mm	350	184.2
7 mm	1,400	200.0
9 mm	1,400	155.6
12 mm	2,400	200.0

Comparing the nominal 24 mm thick Woven Image EchoPanel® tested in BRANZ ISO room test FI12432-001 with the assessed nominal 1.9 mm, 7 mm, 9 mm and 12 mm Woven Image Mura and EchoPanel® the weight in gsm is less than the 24 mm sample by 88%, 53%, 53% and 20% respectively.

On the basis that for identical product composition and where the thickness and weight is reduced compared with the product that was tested, then it follows that the quantity of combustible material is also reduced and therefore the Group Number and Smoke Production Rate (SPR) as tested in the BRANZ ISO room test FI 6050 is unlikely to be prejudiced.

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4. CONCLUSION

It is considered that on the basis of the performance of Woven Image EchoPanel® 24 mm, 100% polyester fabric with 3,000 gsm weight as tested in BRANZ ISO room test FI 12432-001, that similar product of the same composition, lesser thickness and weight and therefore less potential heat release, known as Woven Image Mura (1.9 mm), EchoPanel® 7 mm, EchoPanel® 9 mm and EchoPanel® 12 mm, polyester fibre wall panels with weight 350 gsm, 1,400 gsm, and 2,400 gsm are likely to achieve the same result if tested in accordance with AS ISO 9705:2003 (R 2016), as shown in Table 3.

Table 3: Assessed ISO room result for Woven Image Mura (1.9 mm), EchoPanel® 7 mm, EchoPanel® 9 mm and EchoPanel® 12 mm

Building Code Document	Group Number Classification
NCC 2022 Volume One Specification S7C4 determined in accordance with AS 5637.1:2015	1 SMOGRA not more than the 100 m^2/s^2 x 100 limit

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