

Certificate of Assessment

Job No.: NK7709

No. 2363

“Copyright CSIRO 2017 ©”
Copying or alteration of this report
without written authorisation from CSIRO is forbidden.

This is to certify that the specimen described below was tested by the CSIRO Infrastructure Technologies in accordance with Australian/ New Zealand Standard 3837, Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter, 1998, at 50 kW/m², on behalf of:

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FNK 11887.

SAMPLE

IDENTIFICATION: DecorTrend, DecorZen, DecorTile, DecorArti, DecorMilano, DecorStyle

DESCRIPTION OF

SAMPLE: The sponsor described the tested specimen as a timber veneer-faced standard medium density fibreboard (MDF) with an Integrated Acoustic Backing (IAB) on the unexposed face. The MDF had an open area range of 7.7% to 28.4%, and was comprised of the following layers:

Layer 1: polyurethane clear coating;
Layer 2: timber veneer;
Layer 3: 12-mm to 16-mm standard MDF;
Layer 4: IAB layer.

Nominal total thickness: 12-mm to 16-mm
Colour: natural timber

SAMPLE

CLASSIFICATION: Group Number: Group 3
(In accordance with Specification A2.4 of the Building Code of Australia.) ^{1,2}

Average specific extinction area: 33.4 m²/kg
(Refer to Specification C1.10 section 4(c) of the Building Code of Australia.) ^{1,2}

Notes:

1. The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
2. As per Section 9 (n) of AS 5637.1:2015, the determination of the group number was based on the AS/NZS 3837:1998 test, and was deemed valid in the cone calorimeter for the assignment of National Construction Code (NCC) group number.

Testing Officer: Heherson Alarde Date of Test: 1 February 2017

Issued on the 7th day of February 2017 without alterations or additions.



Brett Roddy
Team Leader, Fire Testing and Assessments



NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.

CSIRO INFRASTRUCTURE TECHNOLOGIES

14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555 www.csiro.au



Test on timber veneer-faced MDF board with acoustic backing material at 50-kW/m² irradiance in accordance with AS/NZS 3837:1998

Fire Testing Report

Author: Heherson Alarde
Report Number: FNK 11887
Quote Number: NK7709

Date: 7 February 2017
Version: Draft

Client: D.R. Faulkes & E.D. Faulkes trading as Decor Systems

Commercial-in-confidence



NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.

Enquiries

Enquiries should be addressed to:

| Team Leader, Fire Testing and Assessments | Author | Client |
|--|--|---|
| Infrastructure Technologies 14 Julius Avenue North Ryde, NSW 2113 Australia Telephone +61 2 94905444 | Infrastructure Technologies 14 Julius Avenue North Ryde, NSW 2113 Australia Telephone +61 2 94905445 | D.R. Faulkes & E.D. Faulkes trading as Decor Systems 6 Millennium Court Silverwater NSW 2128 Australia |




Test Report Details

| | |
|--|--|
| Document: Fire Testing Report | Test Standard: AS/NZS 3837:1998 at 50-kW/m ² irradiance |
| Client: D.R. Faulkes & E.D. Faulkes trading as Decor Systems | Quote Number: NK7709 |

Test Report Status and Revision History

| VERSION | STATUS | DATE | DISTRIBUTION | COMMENT | ISSUE NO. |
|---------|---------------------------|-----------------|---|---------|-----------|
| Draft | Draft for internal review | 6 February 2017 | CSIRO | CSIRO | Draft |
| A | Final for issue | 7 February 2017 | CSIRO; D.R. Faulkes & E.D. Faulkes trading as Decor Systems | | FNK 11887 |

Test Report Authorisation

| AUTHOR | REVIEWED BY | AUTHORISED BY |
|---|---|---|
| Heherson Alarde  7 February 2017 | Russell Collins  7 February 2017 | Brett Roddy  7 February 2017 |

Use of this Report

Use of Reports – Testing

This report is subject to binding obligations under which it was prepared. In particular, the Report must not be used:

- *as a means of endorsement; or*
- *in a company prospectus or notification to a Stock Exchange document for capital raising, without the prior written consent of CSIRO.*

The Report may be published verbatim and in full, provided that a statement is included on the publication that it is a copy of the Report issued by CSIRO.

Excerpts of the Report may not be published without the prior written consent of CSIRO.

Copyright and disclaimer

© 2017 CSIRO To the extent permitted by law, all rights are reserved and no part of this publication covered by copyright may be reproduced or copied in any form or by any means except with the written permission of CSIRO.

Important disclaimer

CSIRO advises that the information contained in this publication comprises general statements based on scientific research. The reader is advised and needs to be aware that such information may be incomplete or unable to be used in any specific situation. No reliance or actions must therefore be made on that information without seeking prior expert professional, scientific and technical advice. To the extent permitted by law, CSIRO (including its employees and consultants) excludes all liability to any person for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using this publication (in part or in whole) and any information or material contained in it.

Contents

| | | |
|---|-------------------------------------|---|
| 1 | Summary | 1 |
| 2 | Test Details..... | 1 |
| | 2.1 Sample Identification | 1 |
| | 2.2 Sponsor | 1 |
| | 2.3 Manufacturer..... | 1 |
| | 2.4 Job Number..... | 1 |
| | 2.5 Test Date | 1 |
| | 2.6 Description of Sample..... | 1 |
| | 2.7 Documentation | 2 |
| 3 | Method..... | 2 |
| | 3.1 Conditioning of Specimens | 2 |
| | 3.2 Test Method..... | 2 |
| | 3.3 Departure from Standard | 2 |
| | 3.4 Duration of Test | 2 |
| 4 | Results and Observations..... | 3 |
| | Observations | 3 |
| | 4.2 Results of Tests | 4 |
| 5 | Assessment Certificate..... | 7 |

Tables

| | |
|-------------------------------|---|
| Table 1 Results of test | 4 |
|-------------------------------|---|

Figures

| | |
|--|---|
| Figure 1 Heat Release Rate (HRR)..... | 5 |
| Figure 2 Effective Heat of Combustion (EHC)..... | 6 |
| Figure 3 Certificate of Assessment 2363 | 7 |

1 Summary

Sponsored Investigation Report Number FNK 11887

Test on timber veneer-faced MDF board with acoustic backing material at 50-kW/m² irradiance in accordance with AS/NZS 3837:1998

2 Test Details

2.1 Sample Identification

DecorTrend, DecorZen, DecorTile, DecorArti, DecorMilano, DecorStyle
(Samples labelled 2-9 to 2-16)

2.2 Sponsor

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

2.3 Manufacturer

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

2.4 Job Number

NK7709

2.5 Test Date

1 February 2017

2.6 Description of Sample

The sponsor described the tested specimen as a timber veneer-faced standard medium density fibreboard (MDF) with an Integrated Acoustic Backing (IAB) on the unexposed face. The MDF had an open area range of 7.7% to 28.4%, and was comprised of the following layers:

Layer 1: polyurethane clear coating;
Layer 2: timber veneer;
Layer 3: 12-mm to 16-mm standard MDF;
Layer 4: IAB layer.

Nominal total thickness: 12-mm to 16-mm
Colour: natural timber

2.7 Documentation

The following documents were supplied by the sponsor as a full and complete description of the sample:

- Test Agreement and form FTAF33 dated 29 November 2016.

3 Method

3.1 Conditioning of Specimens

Prior to the test, the specimens were conditioned to constant mass at a temperature of $23 \pm 2^\circ\text{C}$ and a relative humidity of $50 \pm 10\%$.

3.2 Test Method

Tests were performed in accordance with Australian/New Zealand Standard 3837:1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter. All test specimens were exposed in the horizontal orientation with the standard pilot operating.

Nominally 100 x 100-mm specimens were tested as supplied. Specimens were tested with the use of an edge frame. The edge frame reduces the test surface area to 0.0088-m^2 and this is the area used in calculations.

Three specimens were tested at an irradiance level of 50-kW/m^2 .

The nominal exhaust system flow rate for all tests was $0.024\text{-m}^3/\text{s}$.

A measured quantity of ethanol was burnt to obtain a C factor to be used in the Heat Release calculations.

3.3 Departure from Standard

In performing heat release rate calibration to determine the orifice constant, *C*, an alternative procedure was employed as specified in Clause 10.2.4 of ISO 5660-1:2002(E) by burning a measured quantity of absolute ethanol.

3.4 Duration of Test

The test is terminated when any one of the following is applicable:

1. 2 minutes have passed since all flaming from the specimen ceased; and
2. the average mass loss over a 1 minute period has dropped below 150-g/m^2 ;
3. 60 minutes have elapsed; or
4. the specimen fails to ignite after a 10 minute exposure.

4 Results and Observations

Observations

4.1.1 SPECIMEN 1

The specimen began to smoke after 10 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.2 SPECIMEN 2

The specimen began to smoke after 5 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.3 SPECIMEN 3

The specimen began to smoke after 10 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.2 Results of Tests

The results of tests as specified in the Standard are summarised in Table 1.

Test Details:

Date of test: 01/02/17
 Test Report Date: 07/02/17
 Ethanol burn ('C' factors): 0.036735

Table 1 Results of test

| | IRRADIANCE (kW/m ²) | TIME TO SUSTAINED BURNING (s) | TEST DURATION (s) | THICKNESS (mm) | SPECIMEN MASS (g) | MASS REMAINING (g) | MASS LOSS (g) | PERCENT OF MASS PYROLYSED (%) | AVERAGE RATE OF MASS LOSS (g/m ² .s) | PEAK HRR (kW/m ²) | AVERAGE HRR (FIRST 60s AFTER IGN) | AVERAGE HRR (FIRST 180s AFTER IGN) | AVERAGE HRR (FIRST 300s AFTER IGN) | TOTAL HEAT RELEASED (MJ/m ²) | AVERAGE EHC (MJ/kg) | AVERAGE SPECIFIC EXTINCTION AREA (m ² /kg) |
|----------|---------------------------------|-------------------------------|-------------------|----------------|-------------------|--------------------|---------------|-------------------------------|---|-------------------------------|-----------------------------------|------------------------------------|------------------------------------|--|---------------------|---|
| Sample 1 | 50 | 29 | 600 | 16.86 | 90.55 | 19.05 | 71.50 | 78.96 | 14.00 | 307.2 | 125.5 | 141.4 | 138.5 | 97.80 | 12.04 | 26.9 |
| Sample 2 | 50 | 36 | 645 | 13.24 | 82.85 | 18.15 | 64.70 | 78.09 | 11.84 | 214.5 | 119.8 | 131.4 | 131.2 | 91.29 | 12.42 | 37.7 |
| Sample 3 | 50 | 30 | 715 | 13.03 | 77.08 | 8.08 | 69.00 | 89.52 | 11.00 | 223.6 | 106.1 | 146.9 | 171.3 | 102.57 | 13.08 | 35.7 |
| Mean | | 31.7 | 653.3 | | 83.5 | 15.1 | 68.4 | 82.2 | 12.3 | 248.4 | 117.1 | 139.9 | 147.0 | 97.2 | 12.5 | 33.4 |
| SD | | 3.8 | 58.0 | | 6.8 | 6.1 | 3.4 | 6.4 | 1.5 | 51.1 | 10.0 | 7.9 | 21.3 | 5.7 | 0.5 | 5.8 |

Notes:

1. The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
2. As per Section 9 (n) of AS 5637.1:2015, the determination of the group number was based on the AS/NZS 3837:1998 test, and was deemed valid in the cone calorimeter for the assignment of National Construction Code (NCC) group number.

Figure 1 Heat Release Rate (HRR)

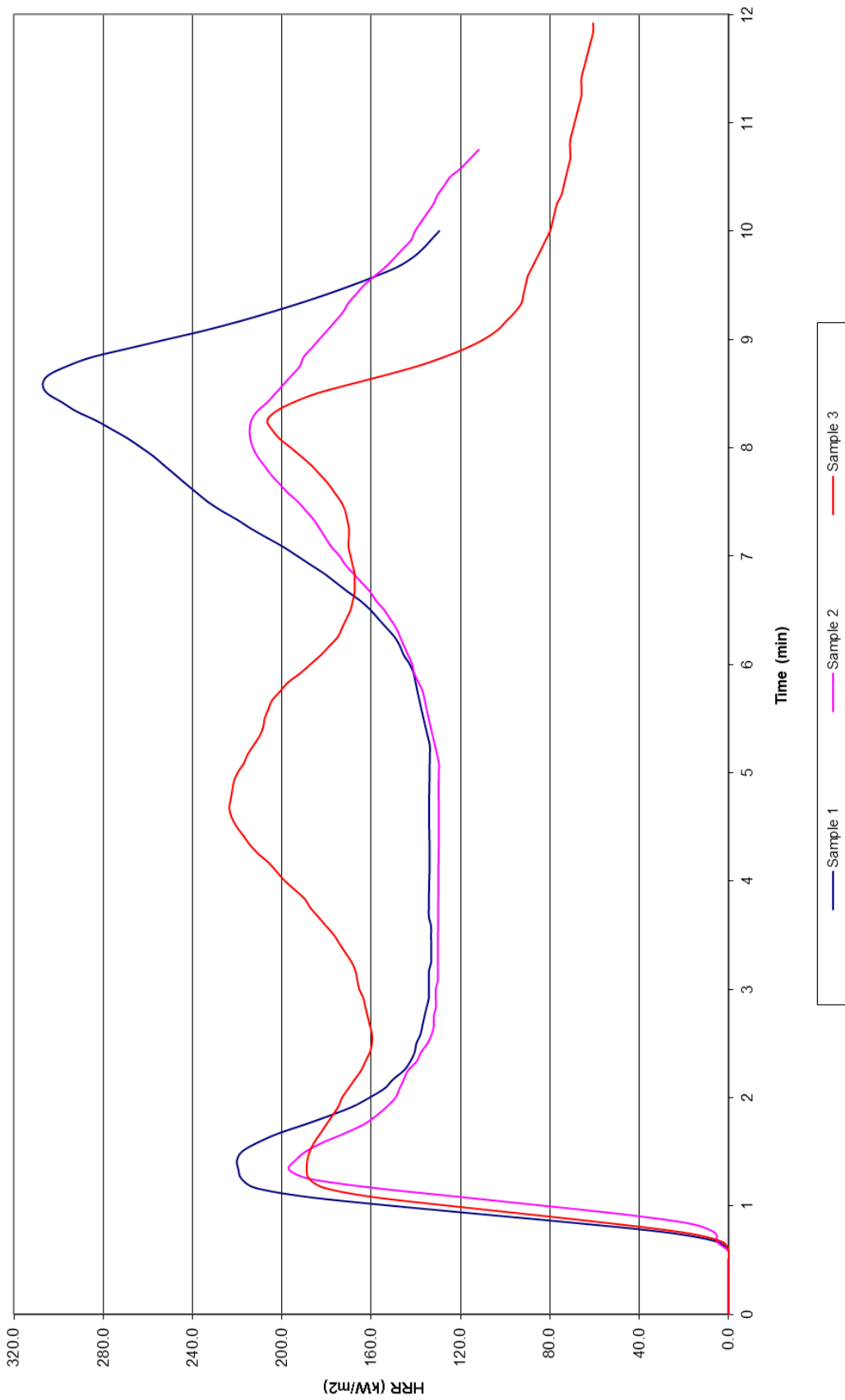
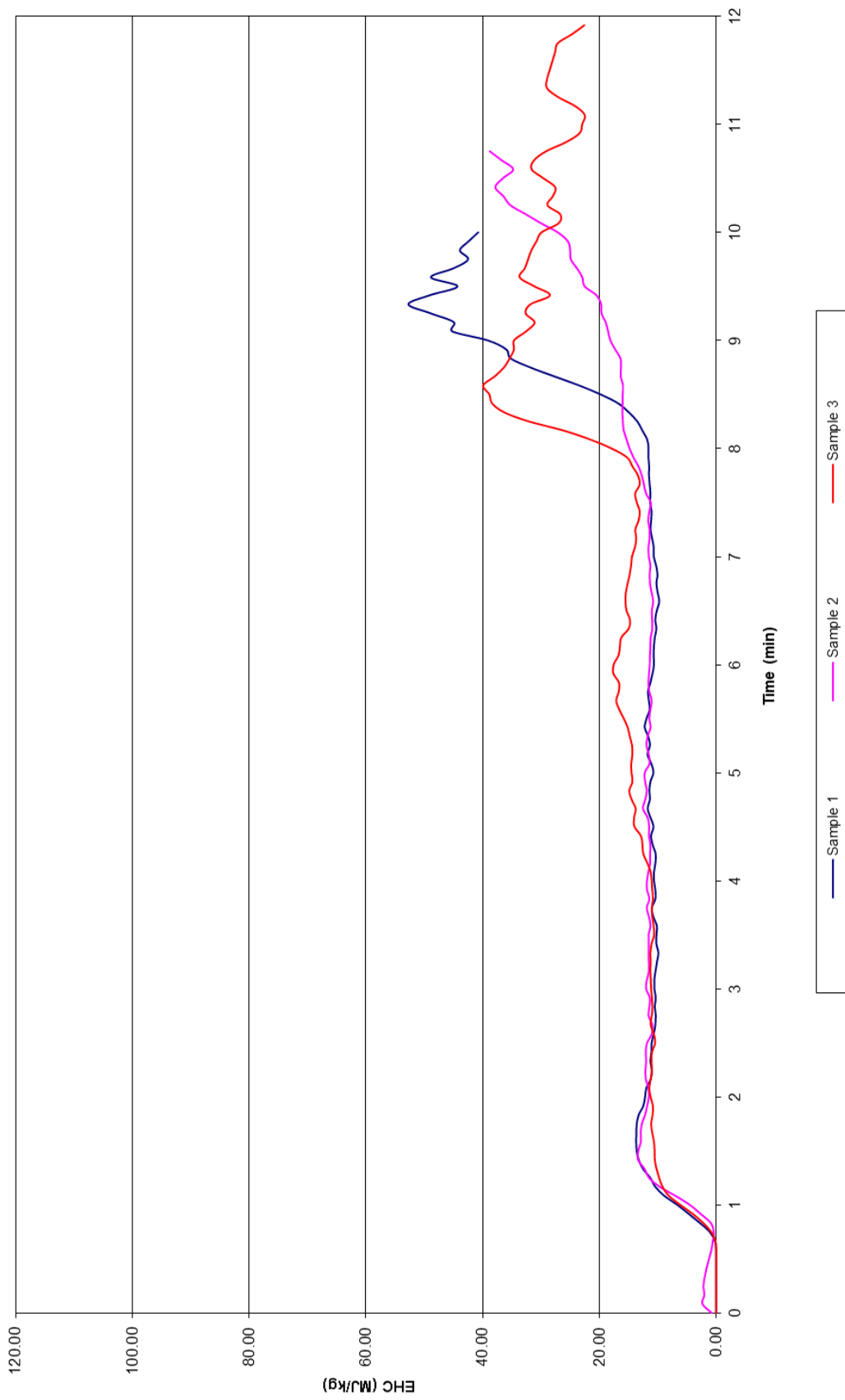


Figure 2 Effective Heat of Combustion (EHC)



5 Assessment Certificate

Figure 3 Certificate of Assessment 2363

Certificate of Assessment

Job No.: NK7709**No.** 2363

“Copyright CSIRO 2017 ©”
Copying or alteration of this report
without written authorisation from CSIRO is forbidden.

This is to certify that the specimen described below was tested by the CSIRO Infrastructure Technologies in accordance with Australian/ New Zealand Standard 3837, Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter, 1998, at 50 kW/m², on behalf of:

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FNK 11887.

SAMPLE IDENTIFICATION: DecorTrend, DecorZen, DecorTile, DecorArti, DecorMilano, DecorStyle

DESCRIPTION OF SAMPLE: The sponsor described the tested specimen as a timber veneer-faced standard medium density fibreboard (MDF) with an Integrated Acoustic Backing (IAB) on the unexposed face. The MDF had an open area range of 7.7% to 28.4%, and was comprised of the following layers:

| | |
|----------|------------------------------|
| Layer 1: | polyurethane clear coating; |
| Layer 2: | timber veneer; |
| Layer 3: | 12-mm to 16-mm standard MDF; |
| Layer 4: | IAB layer. |

Nominal total thickness: 12-mm to 16-mm
Colour: natural timber

SAMPLE CLASSIFICATION: Group Number: Group 3
(In accordance with Specification A2.4 of the Building Code of Australia.)^{1,2}
Average specific extinction area: 33.4 m²/kg
(Refer to Specification C1.10 section 4(c) of the Building Code of Australia.)^{1,2}

Notes:

- The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
- As per Section 9 (n) of AS 5637.1:2015, the determination of the group number was based on the AS/NZS 3837:1998 test, and was deemed valid in the cone calorimeter for the assignment of National Construction Code (NCC) group number.

Testing Officer: Heherson Alarde **Date of Test:** 1 February 2017

Issued on the 7th day of February 2017 without alterations or additions.

Brett Roddy
Team Leader, Fire Testing and Assessments

NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.

CSIRO INFRASTRUCTURE TECHNOLOGIES

14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555 www.csiro.au

CONTACT US

t 1300 363 400
+61 3 9252 6000
e enquiries@csiro.au
w www.csiro.au

YOUR CSIRO

Australia is founding its future on science and innovation. Its national science agency, CSIRO, is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.

FOR FURTHER INFORMATION

Infrastructure Technologies
Heherson Alarde
Fire Testing Engineer
t +61 2 9490 5445
e heherson.alarde@csiro.au
w www.csiro.au/en/Do-business/Services/Materials-infrastructure/Fire-safety

Infrastructure Technologies
Brett Roddy
Team Leader, Fire Testing and Assessments
t +61 2 94905449
e brett.roddey@csiro.au
w www.csiro.au/en/Do-business/Services/Materials-infrastructure/Fire-safety

Certificate of Assessment

Job No.: NK7709

No. 2364

“Copyright CSIRO 2017 ©”
Copying or alteration of this report
without written authorisation from CSIRO is forbidden.

This is to certify that the specimen described below was tested by the CSIRO Infrastructure Technologies in accordance with Australian/ New Zealand Standard 3837, Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter, 1998, at 50 kW/m², on behalf of:

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FNK 11888.

SAMPLE

IDENTIFICATION: DecorTrend, DecorZen, DecorTile, DecorArti, DecorMilano, DecorStyle

DESCRIPTION OF SAMPLE:

The sponsor described the tested specimen as a two pack polyurethane-coated medium density fibreboard (MDF) with an Integrated Acoustic Backing (IAB) on the unexposed face. The MDF had an open area range of 7.7% to 28.4% and was comprised of the following layers:

Layer 1: Polyurethane;
Layer 2: 12-mm to 16-mm standard MDF;
Layer 3: IAB layer.

Nominal total thickness: 12-mm to 16-mm
Colour: white (polyurethane coating)

SAMPLE

CLASSIFICATION: Group Number: Group 3
(In accordance with Specification A2.4 of the Building Code of Australia.) ^{1,2}

Average specific extinction area: 40.4 m²/kg
(Refer to Specification C1.10 section 4(c) of the Building Code of Australia.) ^{1,2}

Notes:

1. The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
2. As per Section 9 (n) of AS 5637.1:2015, the determination of the group number was based on the AS/NZS 3837:1998 test, and was deemed valid in the cone calorimeter for the assignment of National Construction Code (NCC) group number.

Testing Officer: Heherson Alarde Date of Test: 2 February 2017

Issued on the 7th day of February 2017 without alterations or additions.



Brett Roddy
Team Leader, Fire Testing and Assessments



NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.

CSIRO INFRASTRUCTURE TECHNOLOGIES

14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555 www.csiro.au



Test on polyurethane-coated MDF board with acoustic backing material at 50-kW/m² irradiance in accordance with AS/NZS 3837:1998

Fire Testing Report

Author: Heherson Alarde
Report Number: FNK 11888
Quote Number: NK7709

Date: 7 February 2017
Version: A

Client: D.R. Faulkes & E.D. Faulkes trading as Decor Systems

Commercial-in-confidence



NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.

Enquiries

Enquiries should be addressed to:

| Team Leader, Fire Testing and Assessments | Author | Client |
|--|--|---|
| Infrastructure Technologies 14 Julius Avenue North Ryde, NSW 2113 Australia Telephone +61 2 94905444 | Infrastructure Technologies 14 Julius Avenue North Ryde, NSW 2113 Australia Telephone +61 2 94905445 | D.R. Faulkes & E.D. Faulkes trading as Decor Systems 6 Millennium Court Silverwater NSW 2128 Australia |




Test Report Details

| | |
|--|--|
| Document: Fire Testing Report | Test Standard: AS/NZS 3837:1998 at 50-kW/m ² irradiance |
| Client: D.R. Faulkes & E.D. Faulkes trading as Decor Systems | Quote Number: NK7709 |

Test Report Status and Revision History

| VERSION | STATUS | DATE | DISTRIBUTION | COMMENT | ISSUE NO. |
|---------|---------------------------|-----------------|---|---------|-----------|
| Draft | Draft for internal review | 6 February 2017 | CSIRO | CSIRO | Draft |
| A | Final for issue | 7 February 2017 | CSIRO; D.R. Faulkes & E.D. Faulkes trading as Decor Systems | | FNK 11888 |

Test Report Authorisation

| AUTHOR | REVIEWED BY | AUTHORISED BY |
|---|---|---|
| Heherson Alarde  7 February 2017 | Russell Collins  7 February 2017 | Brett Roddy  7 February 2017 |

Use of this Report

Use of Reports – Testing

This report is subject to binding obligations under which it was prepared. In particular, the Report must not be used:

- as a means of endorsement; or*
- in a company prospectus or notification to a Stock Exchange document for capital raising, without the prior written consent of CSIRO.*

The Report may be published verbatim and in full, provided that a statement is included on the publication that it is a copy of the Report issued by CSIRO.

Excerpts of the Report may not be published without the prior written consent of CSIRO.

Copyright and disclaimer

© 2017 CSIRO To the extent permitted by law, all rights are reserved and no part of this publication covered by copyright may be reproduced or copied in any form or by any means except with the written permission of CSIRO.

Important disclaimer

CSIRO advises that the information contained in this publication comprises general statements based on scientific research. The reader is advised and needs to be aware that such information may be incomplete or unable to be used in any specific situation. No reliance or actions must therefore be made on that information without seeking prior expert professional, scientific and technical advice. To the extent permitted by law, CSIRO (including its employees and consultants) excludes all liability to any person for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using this publication (in part or in whole) and any information or material contained in it.

Contents

| | | |
|---|-------------------------------------|---|
| 1 | Summary | 1 |
| 2 | Test Details..... | 1 |
| | 2.1 Sample Identification | 1 |
| | 2.2 Sponsor | 1 |
| | 2.3 Manufacturer..... | 1 |
| | 2.4 Job Number..... | 1 |
| | 2.5 Test Date | 1 |
| | 2.6 Description of Sample..... | 1 |
| | 2.7 Documentation | 2 |
| 3 | Method..... | 2 |
| | 3.1 Conditioning of Specimens | 2 |
| | 3.2 Test Method..... | 2 |
| | 3.3 Departure from Standard | 2 |
| | 3.4 Duration of Test | 2 |
| 4 | Results and Observations..... | 3 |
| | Observations | 3 |
| | 4.2 Results of Tests | 4 |
| 5 | Assessment Certificate..... | 7 |

Tables

| | |
|-------------------------------|---|
| Table 1 Results of test | 4 |
|-------------------------------|---|

Figures

| | |
|--|---|
| Figure 1 Heat Release Rate (HRR)..... | 5 |
| Figure 2 Effective Heat of Combustion (EHC)..... | 6 |
| Figure 3 Certificate of Assessment 2364 | 7 |

1 Summary

Sponsored Investigation Report Number FNK 11888

Test on polyurethane-coated MDF board with acoustic backing material at 50-kW/m² irradiance in accordance with AS/NZS 3837:1998

2 Test Details

2.1 Sample Identification

DecorTrend, DecorZen, DecorTile, DecorArti, DecorMilano, DecorStyle
(Samples labelled 3-17 to 3-24)

2.2 Sponsor

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

2.3 Manufacturer

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

2.4 Job Number

NK7709

2.5 Test Date

2 February 2017

2.6 Description of Sample

The sponsor described the tested specimen as a two pack polyurethane-coated medium density fibreboard (MDF) with an Integrated Acoustic Backing (IAB) on the unexposed face. The MDF had an open area range of 7.7% to 28.4% and was comprised of the following layers:

Layer 1: Polyurethane;
Layer 2: 12-mm to 16-mm standard MDF;
Layer 3: IAB layer.

Nominal total thickness: 12-mm to 16-mm
Colour: white (polyurethane coating)

2.7 Documentation

The following documents were supplied by the sponsor as a full and complete description of the sample:

- Test Agreement and form FTAF33 dated 29 November 2016.

3 Method

3.1 Conditioning of Specimens

Prior to the test, the specimens were conditioned to constant mass at a temperature of $23 \pm 2^\circ\text{C}$ and a relative humidity of $50 \pm 10\%$.

3.2 Test Method

Tests were performed in accordance with Australian/New Zealand Standard 3837:1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter. All test specimens were exposed in the horizontal orientation with the standard pilot operating.

Nominally 100 x 100-mm specimens were tested as supplied. Specimens were tested with the use of an edge frame. The edge frame reduces the test surface area to 0.0088-m^2 and this is the area used in calculations.

Six specimens were tested at an irradiance level of 50-kW/m^2 .

The nominal exhaust system flow rate for all tests was $0.024\text{-m}^3/\text{s}$.

A measured quantity of ethanol was burnt to obtain a C factor to be used in the Heat Release calculations.

3.3 Departure from Standard

In performing heat release rate calibration to determine the orifice constant, C , an alternative procedure was employed as specified in Clause 10.2.4 of ISO 5660-1:2002(E) by burning a measured quantity of absolute ethanol.

3.4 Duration of Test

The test is terminated when any one of the following is applicable:

1. 2 minutes have passed since all flaming from the specimen ceased; and
2. the average mass loss over a 1 minute period has dropped below 150-g/m^2 ;
3. 60 minutes have elapsed; or
4. the specimen fails to ignite after a 10 minute exposure.

4 Results and Observations

Observations

4.1.1 SPECIMEN 1

The specimen began to smoke after 9 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.2 SPECIMEN 2

The specimen began to smoke after 11 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.3 SPECIMEN 3

The specimen began to smoke after 5 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.4 SPECIMEN 4

The specimen began to smoke after 11 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.5 SPECIMEN 5

The specimen began to smoke after 20 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.1.6 SPECIMEN 6

The specimen began to smoke after 11 seconds exposure to the test. The specimen ignited during the test. The test was terminated when the average mass loss over a 1 minute period has dropped below 150-g/m².

4.2 Results of Tests

The results of tests as specified in the Standard are summarised in Table 1.

Test Details:

Date of test: 02/02/17
 Test Report Date: 07/02/17
 Ethanol burn ('C' factors): 0.037313

Table 1 Results of test

| | IRRADIANCE (kW/m ²) | TIME TO SUSTAINED BURNING (s) | TEST DURATION (s) | THICKNESS (mm) | SPECIMEN MASS (g) | MASS REMAINING (g) | MASS LOSS (g) | PERCENT OF MASS PYROLYSED (%) | AVERAGE RATE OF MASS LOSS (g/m ² .s) | PEAK HRR (kW/m ²) | AVERAGE HRR (FIRST 60s AFTER IGN) | AVERAGE HRR (FIRST 180s AFTER IGN) | AVERAGE HRR (FIRST 300s AFTER IGN) | TOTAL HEAT RELEASED (MJ/m ²) | AVERAGE EHC (MJ/kg) | AVERAGE SPECIFIC EXTINCTION AREA (m ² /kg) |
|-------------|---------------------------------|-------------------------------|-------------------|----------------|-------------------|--------------------|---------------|-------------------------------|---|-------------------------------|-----------------------------------|------------------------------------|------------------------------------|--|---------------------|---|
| Sample 1 | 50 | 47 | 585 | 16.86 | 89.5 | 21.00 | 68.50 | 76.54 | 14.15 | 309.2 | 150.5 | 160.6 | 149.6 | 97.19 | 12.49 | 25.5 |
| Sample 2 | 50 | 52 | 620 | 13.24 | 81.31 | 20.81 | 60.50 | 74.41 | 11.83 | 252.5 | 143.5 | 134.0 | 136.8 | 82.71 | 12.03 | 44.4 |
| Sample 3 | 50 | 17 | 535 | 13.03 | 61.01 | 10.81 | 50.20 | 82.28 | 10.68 | 239.6 | 80.6 | 134.5 | 163.2 | 75.85 | 13.30 | 59.2 |
| Sample 4 | 50 | 50 | 560 | 12.49 | 86.28 | 21.3 | 65.00 | 75.34 | 14.11 | 283.1 | 160.0 | 150.9 | 141.8 | 88.75 | 12.02 | 41.7 |
| Sample 5 | 50 | 51 | 545 | 15.9 | 88.79 | 22.6 | 66.20 | 74.56 | 14.87 | 339.1 | 151.8 | 158.9 | 156.2 | 93.10 | 12.38 | 33.5 |
| Sample 6 | 50 | 46 | 605 | 12.44 | 87.4 | 22.0 | 65.40 | 74.83 | 13.07 | 360.2 | 161.7 | 149.9 | 133.2 | 92.17 | 12.40 | 38.0 |
| Mean | | 43.8 | 575.0 | | 82.4 | 19.7 | 62.6 | 76.3 | 13.1 | 297.3 | 141.4 | 148.1 | 146.8 | 88.3 | 12.4 | 40.4 |
| SD | | 13.3 | 33.9 | | 10.9 | 4.4 | 6.6 | 3.0 | 1.6 | 47.7 | 30.5 | 11.5 | 11.6 | 7.8 | 0.5 | 11.4 |

Notes:

1. The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
2. As per Section 9 (n) of AS 5637.1:2015, the determination of the group number was based on the AS/NZS 3837:1998 test, and was deemed valid in the cone calorimeter for the assignment of National Construction Code (NCC) group number.

Figure 1 Heat Release Rate (HRR)

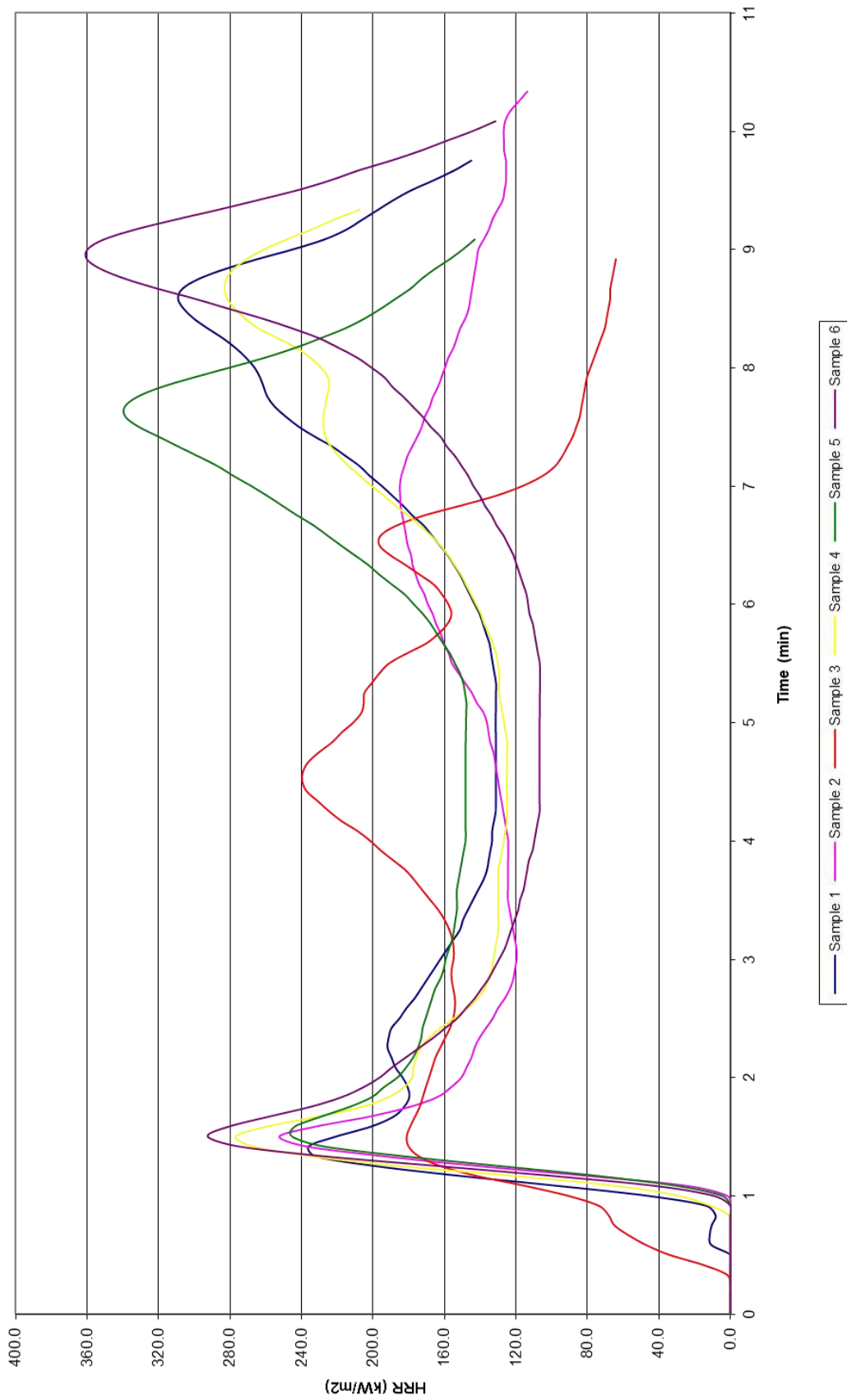
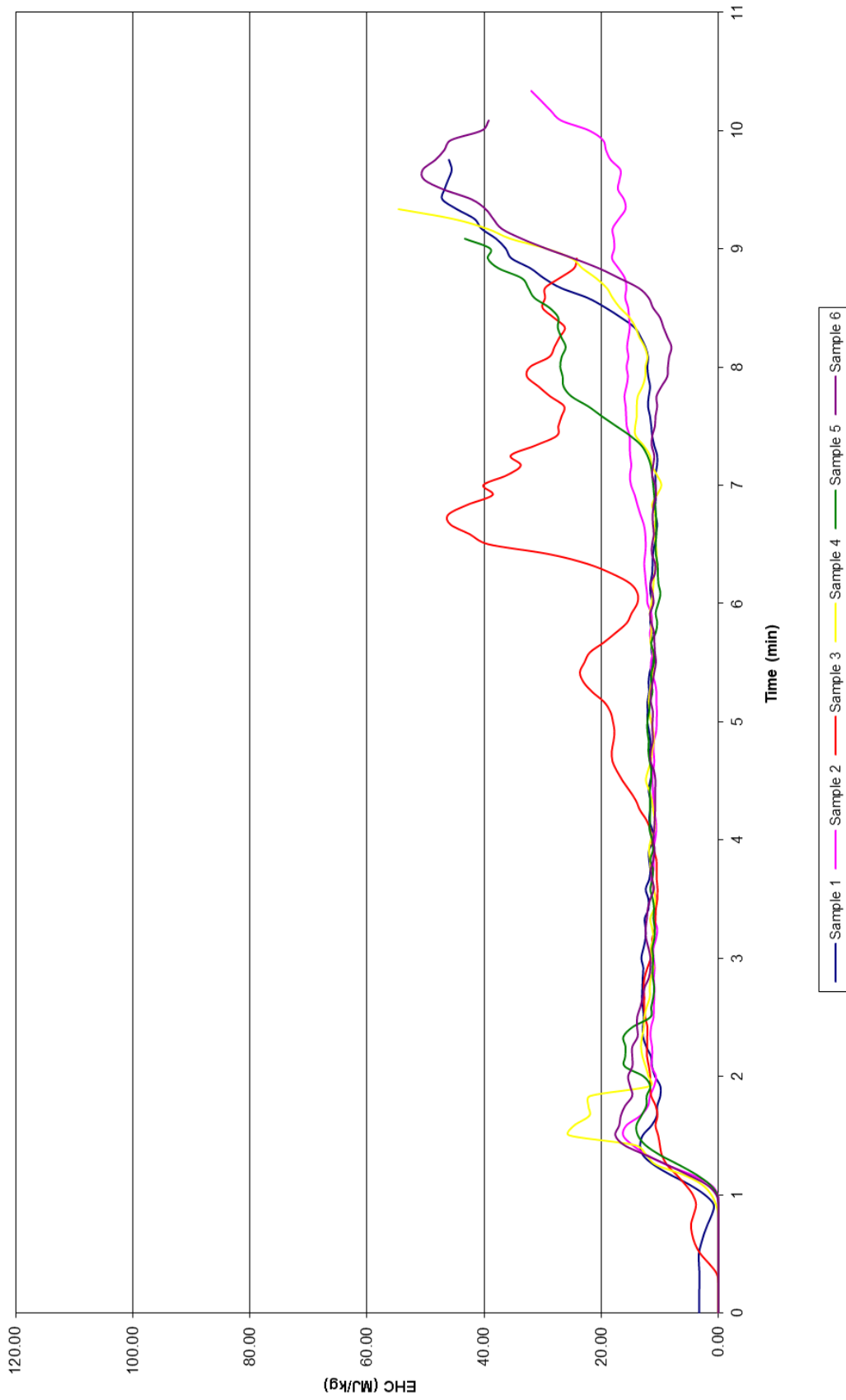


Figure 2 Effective Heat of Combustion (EHC)



5 Assessment Certificate

Figure 3 Certificate of Assessment 2364

Certificate of Assessment

Job No.: NK7709 **No. 2364**

"Copyright CSIRO 2017 ©"
Copying or alteration of this report
without written authorisation from CSIRO is forbidden.

This is to certify that the specimen described below was tested by the CSIRO Infrastructure Technologies in accordance with Australian/ New Zealand Standard 3837, Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter, 1998, at 50 kW/m², on behalf of:

D.R. Faulkes & E.D. Faulkes trading as Decor Systems
6 Millennium Court
SILVERWATER NSW 2128
AUSTRALIA

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FNK 11888.

SAMPLE IDENTIFICATION: DecorTrend, DecorZen, DecorTile, DecorArti, DecorMilano, DecorStyle

DESCRIPTION OF SAMPLE: The sponsor described the tested specimen as a two pack polyurethane-coated medium density fibreboard (MDF) with an Integrated Acoustic Backing (IAB) on the unexposed face. The MDF had an open area range of 7.7% to 28.4% and was comprised of the following layers:

| | |
|----------|------------------------------|
| Layer 1: | Polyurethane; |
| Layer 2: | 12-mm to 16-mm standard MDF; |
| Layer 3: | IAB layer. |

Nominal total thickness: 12-mm to 16-mm
Colour: white (polyurethane coating)

SAMPLE CLASSIFICATION: Group Number: Group 3
(In accordance with Specification A2.4 of the Building Code of Australia.)^{1,2}

Average specific extinction area: 40.4 m²/kg
(Refer to Specification C1.10 section 4(c) of the Building Code of Australia.)^{1,2}

Notes:

1. The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.
2. As per Section 9 (n) of AS 5637.1:2015, the determination of the group number was based on the AS/NZS 3837:1998 test, and was deemed valid in the cone calorimeter for the assignment of National Construction Code (NCC) group number.

Testing Officer: Heherson Alarde **Date of Test:** 2 February 2017

Issued on the 7th day of February 2017 without alterations or additions.


Brett Roddy
Team Leader, Fire Testing and Assessments



NATA Accredited Laboratory
Number: 165
Corporate Site No 3625
Accredited for compliance with ISO/IEC 17025 - Testing.



CSIRO INFRASTRUCTURE TECHNOLOGIES

14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555 www.csiro.au

CONTACT US

t 1300 363 400
+61 3 9252 6000
e enquiries@csiro.au
w www.csiro.au

YOUR CSIRO

Australia is founding its future on science and innovation. Its national science agency, CSIRO, is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.

FOR FURTHER INFORMATION

Infrastructure Technologies

Heherson Alarde
Fire Testing Engineer
t +61 2 9490 5445
e heherson.alarde@csiro.au
w www.csiro.au/en/Do-business/Services/Materials-infrastructure/Fire-safety

Infrastructure Technologies

Brett Roddy
Team Leader, Fire Testing and Assessments
t +61 2 94905449
e brett.rodny@csiro.au
w www.csiro.au/en/Do-business/Services/Materials-infrastructure/Fire-safety