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Entwicklungs- und Prueflabor Holztechnologie GmbH · Zellescher Weg 24 · 01217 Dresden · Germany

Cedar Decor Pvt. Ltd.
Mr. Nilpa Patel
F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway
AHMEDABAD-380 015, GUJARAT
INDIEN

Entwicklungs- und Prueflabor
Holztechnologie GmbH
Zellescher Weg 24
01217 Dresden · Germany

Phone: +49 351 4662 0
Fax: +49 351 4662 211
info@eph-dresden.de
www.eph-dresden.de

Dresden, 04 May 2015
70-em/we

Interim Report
Order No. 2715004

Client:	Cedar Decor Pvt. Ltd. F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway Ahmedabad-380 015, Gujarat India
Date of order:	10 February 2015
Order:	Performance of selected tests on exterior-grade compact laminates
Contractor:	EPH – Laboratory Surface Testing
Engineer in charge:	Dipl.-Ing. S. Wenk

i.V.

Dr.-Ing. Rico Emmler
Head of Laboratory Surface Testing

The interim report contains 4 pages. Any duplication, even in part, requires written permission of EPH. These test results are exclusively related to the tested material.

1 Task

The Development and Examination Laboratory for Wood Technology Ltd. (EPH) was ordered by Cedar Decor Pvt. Ltd. to carry out selected tests on exterior-grade compact laminates.

2 Test material

The client has sent 2 variants of laminated boards (receipt at the EPH-laboratory: 26 February 2015). The variants were identified as following:

Variant	Name of samples by the client (sample ID)	Test pieces / dimension [mm]
1	SF 2277	6 / 145 x 65
2	SF 2227-82227	6 / 145 x 65

3 Test performance

3.1 Light fastness

The light fastness test was carried out with a Xenon Weather Ometer Ci3000+ (KL55) according to EN 438-2, part 27:2005, using the following parameters according to EN ISO 4892-2:

- Irradiation conditions behind window glass (water cooled equipment)
- Black standard temperature (BST) of (65±3) °C
- Relative humidity (50±5) %
- Rate of irradiance (60±3) W/m² in the wavelength range 300 - 400 nm
- Exposure until blue wool scale grade 6 according to ISO 105-B02 is reached

Visual assessments of the samples concerning colour change were carried out at blue wool scale grade 4 and 6 of exposure using the grey scale according to EN ISO 105-A02.
Light fastness values were determined according to EN 438-2.

3.2 Resistance to artificial weathering

The artificial weathering was carried out according to EN 438-2:2005 part 29, (EN ISO 4892-2) with Xenon tester Weather Ometer CI 3000 (test device KL 31). The overall weathering time is 3000 hours (=650 MJ/m² radiant exposure).
The test was carried out with the following device parameters:

- Method A (full global radiation), Cycle 1
- 65 ° C black standard temperature
- 65 % relative humidity
- Weathering cycle consisted of a spray cycle 18 min, 102 min drying phase

The following assessments were carried out to characterize the weathering resistance:

- Visual assessment of the colour change after exposure using the grey scale according to EN ISO 105-A02 after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (contrast)
- Visual assessment according to in EN 438:2005, part 2, after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (appearance)

Requirements

The requirements for weather resistance according to DIN EN 438-6:2005 are summarized in the following table for the tested properties.

Property / Test method	Attribute	Unit	Laminate grade	
			EGS and EGF	EDS and EDF
Resistance to artificial weathering / EN 438-2, part 29	Contrast	Grey scale rating (not worse than)	3 *	3**
	Appearance	Rating (min)	4 *	4**

* after 325 MJ/m² radiant exposure
** after 650 MJ/m² radiant exposure

4 Results

4.1 Light fastness

Variant	Change of sample colour in grey scale N° due to colour change of blue wool scale		Light fastness as grades of the blue wool scale according to EN 438:2005
	grade 4	grade 6	
1	5	5	> 6
2	5	5	> 6

Grey scale N° 5	no change of colour
Grey scale N° 4,5	very small change of colour
Grey scale N° 4	small change of colour
Grey scale N° 3,5	recognisable change of colour
Grey scale N° 3	clearly recognisable change of colour
Grey scale N° 2,5	very clearly recognisable change of colour
Grey scale N° 2	strong change of colour
Grey scale N° 1	very strong change of colour

4.2 Resistance to artificial weathering

The examination is still on going. Final results are available at 31 July 2015.

4.2.1 Contrast

Recording of the change in colour using grey scale according to DIN EN 20105-A02:

Variant	Change of sample colour in grey scale due to colour change						Requirements for weathering (contrast) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5						
2	5	5						

Rating scale for assessing change in colour using the grey scale:

Grey scale No 5	no change of colour
Grey scale No 4,5	very small change of colour
Grey scale No 4	small change of colour
Grey scale No 3,5	recognisable change of colour
Grey scale No 3	clearly recognisable change of colour
Grey scale No 2,5	very clearly recognisable change of colour
Grey scale No 2	strong change of colour
Grey scale No 1	very strong change of colour

4.2.2 Appearance

Visual assessment according to in EN 438, part 2:

Variant	Visual assessment according to in EN 438 part 2 (rating 1 - 5) after						Requirements for weathering (appearance) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5						
2	5	5						

Assessment criteria according to EN 438-2 (2005), in ratings:

Rating 5: = no visible change
Rating 4: = change of gloss only
Rating 3: = Hairline surface cracks and/or erosion of surface
Rating 2: = Surface cracks
Rating 1: = Blistering and/or delamination

5 Evaluation

The light fastness of both variants is > 6 using the test parameters of EN 438-2, part 27:2005.

Dipl.-Ing. S. Wenk
Engineer in charge

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INDIEN

Entwicklungs- und Prueflabor
Holztechnologie GmbH
Zellescher Weg 24
01217 Dresden · Germany

Phone: +49 351 4662 0
Fax: +49 351 4662 211
info@eph-dresden.de
www.eph-dresden.de

Dresden, 03 June 2015
70-em/we

Interim Report 2
Order No. 2715004

Client:	Cedar Decor Pvt. Ltd. F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway Ahmedabad-380 015, Gujarat India
Date of order:	10 February 2015
Order:	Performance of selected tests on exterior-grade compact laminates
Contractor:	EPH – Laboratory Surface Testing
Engineer in charge:	Dipl.-Ing. S. Wenk

i.V.

Dr.-Ing. Rico Emmler
Head of Laboratory Surface Testing

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1 Task

The Development and Examination Laboratory for Wood Technology Ltd. (EPH) was ordered by Cedar Decor Pvt. Ltd. to carry out selected tests on exterior-grade compact laminates.

2 Test material

The client has sent 2 variants of laminated boards (receipt at the EPH-laboratory: 26 February 2015). The variants were identified as following:

Variant	Name of samples by the client (sample ID)	Test pieces / dimension [mm]
1	SF 2277	6 / 145 x 65
2	SF 2227-82227	6 / 145 x 65

3 Test performance

3.1 Light fastness

The light fastness test was carried out with a Xenon Weather Ometer Ci3000+ (KL55) according to EN 438-2, part 27:2005, using the following parameters according to EN ISO 4892-2:

- Irradiation conditions behind window glass (water cooled equipment)
- Black standard temperature (BST) of (65±3) °C
- Relative humidity (50±5) %
- Rate of irradiance (60±3) W/m² in the wavelength range 300 - 400 nm
- Exposure until blue wool scale grade 6 according to ISO 105-B02 is reached

Visual assessments of the samples concerning colour change were carried out at blue wool scale grade 4 and 6 of exposure using the grey scale according to EN ISO 105-A02.
Light fastness values were determined according to EN 438-2.

3.2 Resistance to artificial weathering

The artificial weathering was carried out according to EN 438-2:2005 part 29, (EN ISO 4892-2) with Xenon tester Weather Ometer CI 3000 (test device KL 31). The overall weathering time is 3000 hours (=650 MJ/m² radiant exposure).
The test was carried out with the following device parameters:

- Method A (full global radiation), Cycle 1
- 65 ° C black standard temperature
- 65 % relative humidity
- Weathering cycle consisted of a spray cycle 18 min, 102 min drying phase

The following assessments were carried out to characterize the weathering resistance:

- Visual assessment of the colour change after exposure using the grey scale according to EN ISO 105-A02 after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (contrast)
- Visual assessment according to in EN 438:2005, part 2, after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (appearance)

Requirements

The requirements for weather resistance according to DIN EN 438-6:2005 are summarized in the following table for the tested properties.

Property / Test method	Attribute	Unit	Laminate grade	
			EGS and EGF	EDS and EDF
Resistance to artificial weathering / EN 438-2, part 29	Contrast	Grey scale rating (not worse than)	3 *	3**
	Appearance	Rating (min)	4 *	4**

* after 325 MJ/m² radiant exposure
** after 650 MJ/m² radiant exposure

4 Results

4.1 Light fastness

Variant	Change of sample colour in grey scale N° due to colour change of blue wool scale		Light fastness as grades of the blue wool scale according to EN 438:2005
	grade 4	grade 6	
1	5	5	> 6
2	5	5	> 6

Grey scale N° 5	no change of colour
Grey scale N° 4,5	very small change of colour
Grey scale N° 4	small change of colour
Grey scale N° 3,5	recognisable change of colour
Grey scale N° 3	clearly recognisable change of colour
Grey scale N° 2,5	very clearly recognisable change of colour
Grey scale N° 2	strong change of colour
Grey scale N° 1	very strong change of colour

4.2 Resistance to artificial weathering

The examination is still on going. Final results are available at 31 July 2015.

4.2.1 Contrast

Recording of the change in colour using grey scale according to DIN EN 20105-A02:

Variant	Change of sample colour in grey scale due to colour change						Requirements for weathering (contrast) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5				fulfilled	
2	5	5	5				fulfilled	

Rating scale for assessing change in colour using the grey scale:

Grey scale No 5	no change of colour
Grey scale No 4,5	very small change of colour
Grey scale No 4	small change of colour
Grey scale No 3,5	recognisable change of colour
Grey scale No 3	clearly recognisable change of colour
Grey scale No 2,5	very clearly recognisable change of colour
Grey scale No 2	strong change of colour
Grey scale No 1	very strong change of colour

4.2.2 Appearance

Visual assessment according to in EN 438, part 2:

Variant	Visual assessment according to in EN 438 part 2 (rating 1 - 5) after						Requirements for weathering (appearance) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5				fulfilled	
2	5	5	5				fulfilled	

Assessment criteria according to EN 438-2 (2005), in ratings:

Rating 5: = no visible change
Rating 4: = change of gloss only
Rating 3: = Hairline surface cracks and/or erosion of surface
Rating 2: = Surface cracks
Rating 1: = Blistering and/or delamination

5 Evaluation

The light fastness of both variants is > 6 using the test parameters of EN 438-2, part 27:2005.

The requirements for weathering (contrast and appearance) after 1500 hours for the type EGS and EGF were fulfilled for both tested variants.

Dipl.-Ing. S. Wenk
Engineer in charge

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Cedar Decor Pvt. Ltd.
Ms. Nilpa Patel
F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway
AHMEDABAD-380 015, GUJARAT
INDIEN

Entwicklungs- und Prueflabor
Holztechnologie GmbH
Zellescher Weg 24
01217 Dresden · Germany

Phone: +49 351 4662 0
Fax: +49 351 4662 211
info@eph-dresden.de
www.eph-dresden.de

Dresden, 19 June 2015
70-em/we

Interim Report 3
Order No. 2715004

Client:	Cedar Decor Pvt. Ltd. F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway Ahmedabad-380 015, Gujarat India
Date of order:	10 February 2015
Order:	Performance of selected tests on exterior-grade compact laminates
Contractor:	EPH – Laboratory Surface Testing
Engineer in charge:	Dipl.-Ing. S. Wenk

i. V.
Dr.-Ing. Rico Emmler
Head of Laboratory Surface Testing

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1 Task

The Development and Examination Laboratory for Wood Technology Ltd. (EPH) was ordered by Cedar Decor Pvt. Ltd. to carry out selected tests on exterior-grade compact laminates.

2 Test material

The client has sent 2 variants of laminated boards (receipt at the EPH-laboratory: 26 February 2015). The variants were identified as following:

Variant	Name of samples by the client (sample ID)	Test pieces / dimension [mm]
1	SF 2277	6 / 145 x 65
2	SF 2227-82227	6 / 145 x 65

3 Test performance

3.1 Light fastness

The light fastness test was carried out with a Xenon Weather Ometer Ci3000+ (KL55) according to EN 438-2, part 27:2005, using the following parameters according to EN ISO 4892-2:

- Irradiation conditions behind window glass (water cooled equipment)
- Black standard temperature (BST) of (65±3) °C
- Relative humidity (50±5) %
- Rate of irradiance (60±3) W/m² in the wavelength range 300 - 400 nm
- Exposure until blue wool scale grade 6 according to ISO 105-B02 is reached

Visual assessments of the samples concerning colour change were carried out at blue wool scale grade 4 and 6 of exposure using the grey scale according to EN ISO 105-A02.
Light fastness values were determined according to EN 438-2.

3.2 Resistance to artificial weathering

The artificial weathering was carried out according to EN 438-2:2005 part 29, (EN ISO 4892-2) with Xenon tester Weather Ometer CI 3000 (test device KL 31). The overall weathering time is 3000 hours (=650 MJ/m² radiant exposure).
The test was carried out with the following device parameters:

- Method A (full global radiation), Cycle 1
- 65 ° C black standard temperature
- 65 % relative humidity
- Weathering cycle consisted of a spray cycle 18 min, 102 min drying phase

The following assessments were carried out to characterize the weathering resistance:

- Visual assessment of the colour change after exposure using the grey scale according to EN ISO 105-A02 after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (contrast)
- Visual assessment according to in EN 438:2005, part 2, after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (appearance)

Requirements

The requirements for weather resistance according to DIN EN 438-6:2005 are summarized in the following table for the tested properties.

Property / Test method	Attribute	Unit	Laminate grade	
			EGS and EGF	EDS and EDF
Resistance to artificial weathering / EN 438-2, part 29	Contrast	Grey scale rating (not worse than)	3 *	3**
	Appearance	Rating (min)	4 *	4**

* after 325 MJ/m² radiant exposure
** after 650 MJ/m² radiant exposure

4 Results

4.1 Light fastness

Variant	Change of sample colour in grey scale N° due to colour change of blue wool scale		Light fastness as grades of the blue wool scale according to EN 438:2005
	grade 4	grade 6	
1	5	5	> 6
2	5	5	> 6

Grey scale N° 5	no change of colour
Grey scale N° 4,5	very small change of colour
Grey scale N° 4	small change of colour
Grey scale N° 3,5	recognisable change of colour
Grey scale N° 3	clearly recognisable change of colour
Grey scale N° 2,5	very clearly recognisable change of colour
Grey scale N° 2	strong change of colour
Grey scale N° 1	very strong change of colour

4.2 Resistance to artificial weathering

The examination is still on going. Final results are available at 31 July 2015.

4.2.1 Contrast

Recording of the change in colour using grey scale according to DIN EN 20105-A02:

Variant	Change of sample colour in grey scale due to colour change						Requirements for weathering (contrast) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5	5			fulfilled	
2	5	5	5	5			fulfilled	

Rating scale for assessing change in colour using the grey scale:

Grey scale No 5	no change of colour
Grey scale No 4,5	very small change of colour
Grey scale No 4	small change of colour
Grey scale No 3,5	recognisable change of colour
Grey scale No 3	clearly recognisable change of colour
Grey scale No 2,5	very clearly recognisable change of colour
Grey scale No 2	strong change of colour
Grey scale No 1	very strong change of colour

4.2.2 Appearance

Visual assessment according to in EN 438, part 2:

Variant	Visual assessment according to in EN 438 part 2 (rating 1 - 5) after						Requirements for weathering (appearance) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5	5			fulfilled	
2	5	5	5	5			fulfilled	

Assessment criteria according to EN 438-2 (2005), in ratings:

Rating 5: = no visible change
Rating 4: = change of gloss only
Rating 3: = Hairline surface cracks and/or erosion of surface
Rating 2: = Surface cracks
Rating 1: = Blistering and/or delamination

5 Evaluation

The light fastness of both variants is > 6 using the test parameters of EN 438-2, part 27:2005.

The requirements for weathering (contrast and appearance) after 1500 hours for the type EGS and EGF were fulfilled for both tested variants.

Dipl.-Ing. S. Wenk
Engineer in charge

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Ms. Nilpa Patel
F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway
AHMEDABAD-380 015, GUJARAT
INDIEN

Entwicklungs- und Prueflabor
Holztechnologie GmbH
Zellescher Weg 24
01217 Dresden · Germany

Phone: +49 351 4662 0
Fax: +49 351 4662 211
info@eph-dresden.de
www.eph-dresden.de

Dresden, 13 July 2015
70-em/we

Interim Report 4
Order No. 2715004

Client:	Cedar Decor Pvt. Ltd. F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway Ahmedabad-380 015, Gujarat India
Date of order:	10 February 2015
Order:	Performance of selected tests on exterior-grade compact laminates
Contractor:	EPH – Laboratory Surface Testing
Engineer in charge:	Dipl.-Ing. S. Wenk

i. V.

Dr.-Ing. Rico Emmler
Head of Laboratory Surface Testing

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1 Task

The Development and Examination Laboratory for Wood Technology Ltd. (EPH) was ordered by Cedar Decor Pvt. Ltd. to carry out selected tests on exterior-grade compact laminates.

2 Test material

The client has sent 2 variants of laminated boards (receipt at the EPH-laboratory: 26 February 2015). The variants were identified as following:

Variant	Name of samples by the client (sample ID)	Test pieces / dimensions [mm]
1	SF 2277	6 / 145 x 65
2	SF 2227-82227	6 / 145 x 65

3 Test performance

3.1 Light fastness

The light fastness test was carried out with a Xenon Weather Ometer Ci3000+ (KL55) according to EN 438-2, part 27:2005, using the following parameters according to EN ISO 4892-2:

- Irradiation conditions behind window glass (water cooled equipment)
- Black standard temperature (BST) of (65±3) °C
- Relative humidity (50±5) %
- Rate of irradiance (60±3) W/m² in the wavelength range 300 - 400 nm
- Exposure until blue wool scale grade 6 according to ISO 105-B02 is reached

Visual assessments of the samples concerning colour change were carried out at blue wool scale grade 4 and 6 of exposure using the grey scale according to EN ISO 105-A02.
Light fastness values were determined according to EN 438-2.

3.2 Resistance to artificial weathering

The artificial weathering was carried out according to EN 438-2:2005 part 29, (EN ISO 4892-2) with Xenon tester Weather Ometer CI 3000 (test device KL 31). The overall weathering time was 3000 hours (=650 MJ/m² radiant exposure).
The test was carried out with the following device parameters:

- Method A (full global radiation), Cycle 1
- 65 ° C black standard temperature
- 65 % relative humidity
- Weathering cycle consisted of a spray cycle 18 min, 102 min drying phase

The following assessments were carried out to characterize the weathering resistance:

- Visual assessment of the colour change after exposure using the grey scale according to EN ISO 105-A02 after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (contrast)
- Visual assessment according to in EN 438:2005, part 2, after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (appearance)

Requirements

The requirements for weather resistance according to DIN EN 438-6:2005 are summarized in the following table for the tested properties.

Property / Test method	Attribute	Unit	Laminate grade	
			EGS and EGF	EDS and EDF
Resistance to artificial weathering / EN 438-2, part 29	Contrast	Grey scale rating (not worse than)	3 *	3**
	Appearance	Rating (min)	4 *	4**

* after 325 MJ/m² radiant exposure
** after 650 MJ/m² radiant exposure

4 Results

4.1 Light fastness

Variant	Change of sample colour in grey scale N° due to colour change of blue wool scale		Light fastness as grades of the blue wool scale according to EN 438:2005
	grade 4	grade 6	
1	5	5	> 6
2	5	5	> 6

Grey scale N° 5	no change of colour
Grey scale N° 4,5	very small change of colour
Grey scale N° 4	small change of colour
Grey scale N° 3,5	recognisable change of colour
Grey scale N° 3	clearly recognisable change of colour
Grey scale N° 2,5	very clearly recognisable change of colour
Grey scale N° 2	strong change of colour
Grey scale N° 1	very strong change of colour

4.2 Resistance to artificial weathering

The examination is still on going. Final results are available on 31 July 2015.

4.2.1 Contrast

Recording of the change in colour using grey scale according to DIN EN 20105-A02:

Variant	Change of sample colour in grey scale due to colour change						Requirements for weathering (contrast) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5	5	5		fulfilled	
2	5	5	5	5	4,5		fulfilled	

Rating scale for assessing change in colour using the grey scale:

Grey scale No 5	no change of colour
Grey scale No 4,5	very small change of colour
Grey scale No 4	small change of colour
Grey scale No 3,5	recognisable change of colour
Grey scale No 3	clearly recognisable change of colour
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Grey scale No 2	strong change of colour
Grey scale No 1	very strong change of colour

4.2.2 Appearance

Visual assessment according to in EN 438, part 2:

Variant	Visual assessment according to in EN 438 part 2 (rating 1 - 5) after						Requirements for weathering (appearance) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5	5	5		fulfilled	
2	5	5	5	5	5		fulfilled	

Assessment criteria according to EN 438-2 (2005), in ratings:

Rating 5: = no visible change
Rating 4: = change of gloss only
Rating 3: = Hairline surface cracks and/or erosion of surface
Rating 2: = Surface cracks
Rating 1: = Blistering and/or delamination

5 Evaluation

The light fastness of both variants is > 6 using the test parameters of EN 438-2, part 27:2005.

The requirements for weathering (contrast and appearance) after 1500 hours for the type EGS and EGF were fulfilled for both tested variants.

Dipl.-Ing. S. Wenk
Engineer in charge

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INDIEN

Entwicklungs- und Prueflabor
Holztechnologie GmbH
Zellescher Weg 24
01217 Dresden · Germany

Phone: +49 351 4662 0
Fax: +49 351 4662 211
info@eph-dresden.de
www.eph-dresden.de

Dresden, 27 July 2015
70-em/we

Test Report
Order No. 2715004

Client:	Cedar Decor Pvt. Ltd. F-2, Shapath-1, Nr. Cargo Motors, S. G. Highway Ahmedabad-380 015, Gujarat India
Date of order:	10 February 2015
Order:	Performance of selected tests on exterior-grade compact laminates
Contractor:	EPH – Laboratory Surface Testing
Engineer in charge:	Dipl.-Ing. S. Wenk

i.V.

Dr.-Ing. Rico Emmler
Head of Laboratory Surface Testing

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1 Task

The Development and Examination Laboratory for Wood Technology Ltd. (EPH) was ordered by Cedar Decor Pvt. Ltd. to carry out selected tests on exterior-grade compact laminates.

2 Test material

The client has sent 2 variants of laminated boards (receipt at the EPH-laboratory: 26 February 2015). The variants were identified as following:

Variant	Name of samples by the client (sample ID)	Test pieces / dimensions [mm]
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2	SF 2227-82227	6 / 145 x 65

3 Test performance

3.1 Light fastness

The light fastness test was carried out with a Xenon Weather Ometer Ci3000+ (KL55) according to EN 438-2, part 27:2005, using the following parameters according to EN ISO 4892-2:

- Irradiation conditions behind window glass (water cooled equipment)
- Black standard temperature (BST) of (65±3) °C
- Relative humidity (50±5) %
- Rate of irradiance (60±3) W/m² in the wavelength range 300-400 nm
- Exposure until blue wool scale grade 6 according to ISO 105-B02 is reached

Visual assessments of the samples concerning colour change were carried out at blue wool scale grade 4 and 6 of exposure using the grey scale according to EN ISO 105-A02.
Light fastness values were determined according to EN 438-2.

3.2 Resistance to artificial weathering

The artificial weathering was carried out according to EN 438-2:2005 part 29, (EN ISO 4892-2) with Xenon tester Weather Ometer CI 3000 (test device KL 31). The overall weathering time was 3000 h (=650 MJ/m² radiant exposure).
The test was carried out with the following device parameters:

- Method A (full global radiation), Cycle 1
- 65 °C black standard temperature
- 65 % relative humidity
- Weathering cycle consisted of a spray cycle 18 min, 102 min drying phase

The following assessments were carried out to characterize the weathering resistance:

- Visual assessment of the colour change after exposure using the grey scale according to EN ISO 105-A02 after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (contrast)
- Visual assessment according to in EN 438:2005, part 2, after 500 h, 1000 h, 1500 h, 2000 h, 2500 h and 3000 h (appearance)

Requirements

The requirements for weather resistance according to DIN EN 438-6:2005 are summarized in the following table for the tested properties.

Property / Test method	**Attribute**	**Unit**	**Laminate grade**	
			EGS and EGF	**EDS and EDF**
Resistance to artificial weathering / EN 438-2, part 29	Contrast	Grey scale rating (not worse than)	3 *	3**
	Appearance	Rating (min)	4 *	4**

* after 325 MJ/m² radiant exposure
** after 650 MJ/m² radiant exposure

4 Results

4.1 Light fastness

Variant	**Change of sample colour in grey scale N^o due to colour change of blue wool scale**		**Light fastness as grades of the blue wool scale according to EN 438:2005**
	grade 4	**grade 6**	
1	5	5	> 6
2	5	5	> 6

Grey scale N^o 5	no change of colour
Grey scale N^o 4,5	very small change of colour
Grey scale N^o 4	small change of colour
Grey scale N^o 3,5	recognisable change of colour
Grey scale N^o 3	clearly recognisable change of colour
Grey scale N^o 2,5	very clearly recognisable change of colour
Grey scale N^o 2	strong change of colour
Grey scale N^o 1	very strong change of colour

4.2 Resistance to artificial weathering

4.2.1 Contrast

Recording of the change in colour using grey scale according to DIN EN 20105-A02:

Variant	Change of sample colour in grey scale due to colour change						Requirements for weathering (contrast) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5	5	5	5	fulfilled	fulfilled
2	5	5	5	5	4,5	4,5	fulfilled	fulfilled

Rating scale for assessing change in colour using the grey scale:

Grey scale No 5	no change of colour
Grey scale No 4,5	very small change of colour
Grey scale No 4	small change of colour
Grey scale No 3,5	recognisable change of colour
Grey scale No 3	clearly recognisable change of colour
Grey scale No 2,5	very clearly recognisable change of colour
Grey scale No 2	strong change of colour
Grey scale No 1	very strong change of colour

4.2.2 Appearance

Visual assessment according to in EN 438, part 2:

Variant	Visual assessment according to in EN 438 part 2 (rating 1 - 5) after						Requirements for weathering (appearance) according to EN 438-6 for type	
	500 h	1000 h	1500 h	2000 h	2500 h	3000 h	EGS and EGF	EDS and EDF
1	5	5	5	5	5	5	fulfilled	fulfilled
2	5	5	5	5	5	5	fulfilled	fulfilled

Assessment criteria according to EN 438-2 (2005), in ratings:

Rating 5: = no visible change
Rating 4: = change of gloss only
Rating 3: = Hairline surface cracks and/or erosion of surface
Rating 2: = Surface cracks
Rating 1: = Blistering and/or delamination

5 Evaluation

The light fastness of both variants is > 6 using the test parameters of EN 438-2, Part 27:2005.

The requirements for weathering (contrast and appearance) according to EN 438-2 Part 29 after exposure of 3000 h for the type EDS and EDF were fulfilled for both tested variants.

The samples will be sent to the client for visual assessment (after aggrement).

Dipl.-Ing. S. Wenk
Engineer in charge