

Gicolor
S.r.l.

Natural Exposure Test



MRK-010-0234

SALT LAKE
series

ESPOSIZIONE NATURALE IN FLORIDA:

Esposizione naturale

Le esposizioni naturali vengono condotte in Florida presso il sito espositivo della Atlas Weathering Service; il sud della Florida fornisce infatti un clima caldo umido e ad alto irraggiamento UV. Invecchiamento naturale: tutti i campioni vengono sottoposti all'irraggiamento naturale in Florida. L'esposizione viene effettuata, in conformità allo standard internazionale descritto nella ISO 2810, rispettando le seguenti specifiche:

- esposizione del pannello in direzione sud
- angolo di inclinazione del pannello 5°
- pannello scoperto sul retro

Al termine del periodo di esposizione, pari a 12 mesi, viene valutata la variazione di brillantezza (EN ISO 2813, con angolo di incidenza 60°) ed il cambiamento di colore ΔE (metodo CIELAB ISO 7724/3) rispetto ai valori di partenza. Anche l'esposizione naturale viene monitorata attraverso l'invio di campioni in bianco ad invecchiamento noto.



Figure: Esposizione naturale, campioni esposti all'AWSG in Florida
Pictures: Florida Natural Exposure, test samples





Natural Exposure Test

Natural Exposure Tests are conducted in Atlas Weathering Service Sites – Florida. South Florida climate indeed is hot, wet and highly exposed to UV-rays. All samples are subjected to natural irradiation in Florida according to the international standard ISO 2810, i.e. complying with the following specifications:

- facing south
- tilt angle 5° from the horizontal
- open backing.

After 12 months exposure period, residual gloss (EN ISO 2813, with an angle of incidence 60°) and colour variation ΔE (CIELAB method - ISO 7724 / 3) are measured comparing pre-test values. Even the Natural Exposure Test accuracy is verified by through the use of samples in white, whose aging behaviour is known.

ID Test Report	PROD. VERNIC	COD. FILM	PROG. N°	IMMAGINI
TR-NE-01-2014	Saltlake-001	solo base	1	
TR-NE-02-2014	Saltlake-002	solo base	2	
TR-NE-03-2014	Saltlake-003	solo base	3	
TR-NE-04-2014	Saltlake-004	solo base	4	
TR-NE-05-2014	Saltlake-006	solo base	5	
TR-NE-06-2014	Saltlake-007	solo base	6	
TR-NE-07-2014	Saltlake-008	solo base	7	
TR-NE-08-2014	Saltlake-013	solo base	8	
TR-NE-09-2014	Saltlake-014	solo base	9	
TR-NE-10-2014	Saltlake-015	solo base	10	
TR-NE-11-2014	Saltlake-016	solo base	11	
TR-NE-12-2014	Saltlake-017	solo base	12	

TR-NE-13-2014	Saltlake-018	solo base	13	
TR-NE-14-2014	Saltlake-019	solo base	14	
TR-NE-15-2014	Saltlake-020	solo base	15	
TR-NE-16-2014	Saltlake-021	solo base	16	
TR-NE-17-2014	Saltlake-022	solo base	17	
TR-NE-18-2014	Saltlake-023	solo base		



**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29187
POWDER COATING: Saltlake-001
HEAT TRANSFER FILM: --
Colour variation (ΔE): 2,79
residual gloss: 50%

Technical Remarks

Sufficient residual gloss and low colour variation (ΔE)
(\pm RAL 9004)

Technical Opinion:

Suitable for OUTDOOR USE

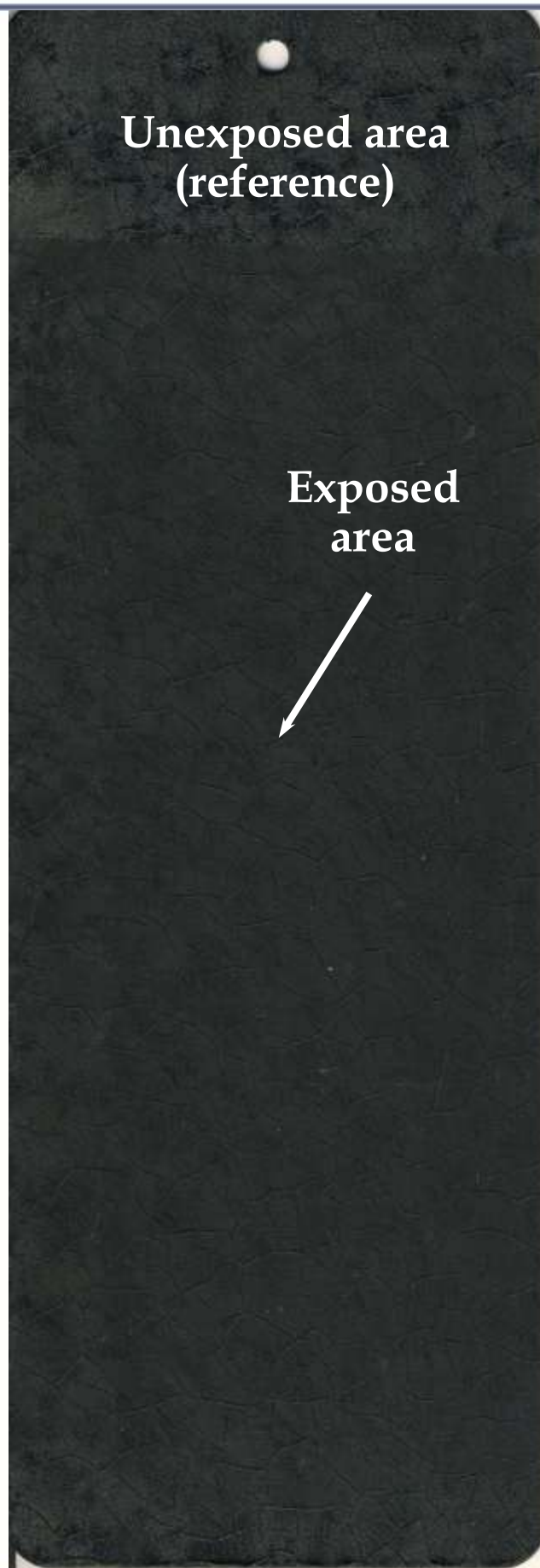
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29188
POWDER COATING: Saltlake-002
HEAT TRANSFER FILM: --
Colour variation (ΔE): 3,21
residual gloss: 59%

Technical Remarks

Sufficient residual gloss and low colour variation (ΔE)
(\pm RAL 5014)

Technical Opinion:

Suitable for OUTDOOR USE

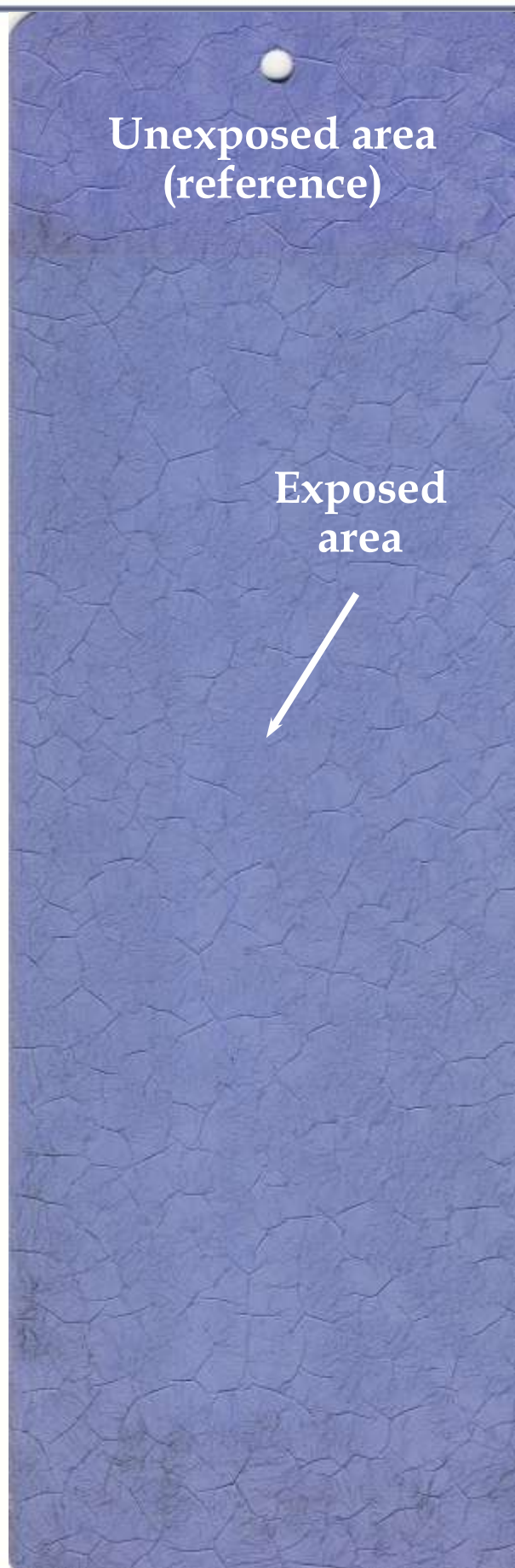
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29189
POWDER COATING: Saltlake-003
HEAT TRANSFER FILM: --
Colour variation (ΔE): 1,88
residual gloss: 83%

Technical Remarks

EXcellent residual gloss and low colour variation (ΔE)
(\pm RAL 3005)

Technical Opinion:

Suitable for OUTDOOR USE

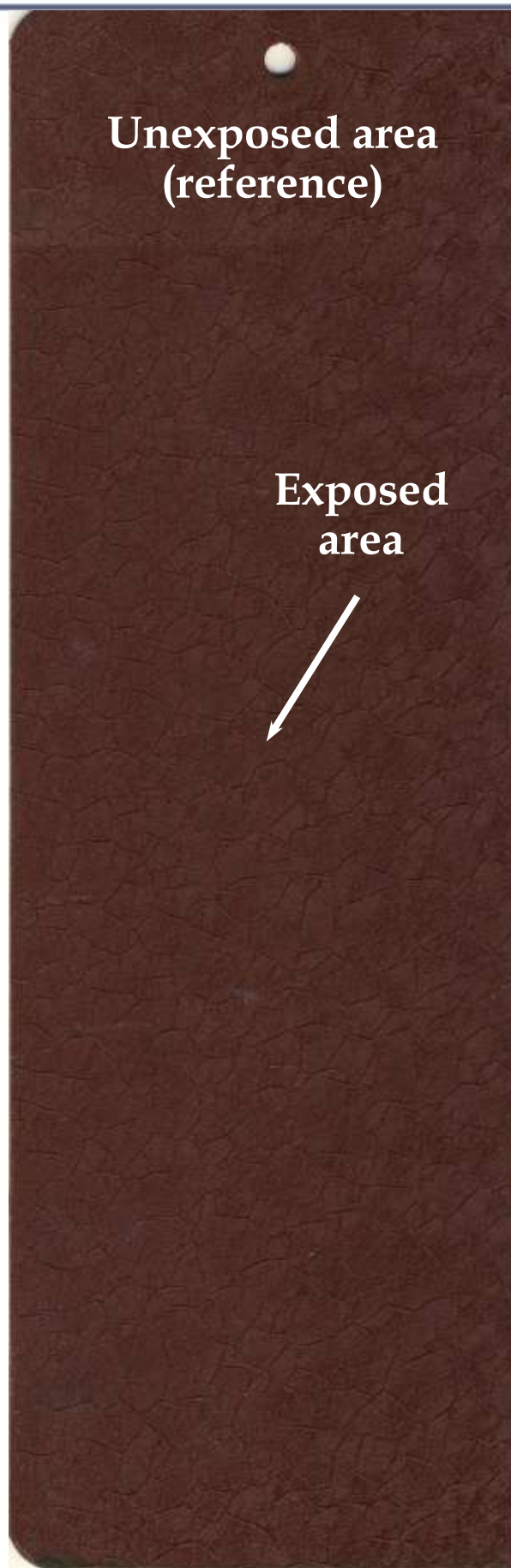
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29190
POWDER COATING: Saltlake-004
HEAT TRANSFER FILM: --
Colour variation (ΔE): **2,17**
residual gloss: **91%**

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 6001)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29192
POWDER COATING: Saltlake-006
HEAT TRANSFER FILM: --
Colour variation (ΔE): **1,69**
residual gloss: **100%**

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 3018)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29193
POWDER COATING: Saltlake-007
HEAT TRANSFER FILM: --
Colour variation (ΔE): 3,21
residual gloss: 79%

Technical Remarks

Good residual gloss and low colour variation (ΔE)
(\pm RAL 1015)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29206
POWDER COATING: Saltlake-008
HEAT TRANSFER FILM: --
Colour variation (ΔE): **2,46**
residual gloss: **61%**

Technical Remarks

Good residual gloss and low colour variation (ΔE)
(\pm RAL 6021)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29198
POWDER COATING: Saltlake-013
HEAT TRANSFER FILM: --
Colour variation (ΔE): **1,41**
residual gloss: **67%**

Technical Remarks

Good residual gloss and low colour variation (ΔE)
(\pm RAL 5004)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29199
POWDER COATING: Saltlake-014
HEAT TRANSFER FILM: --
Colour variation (ΔE): 1,08
residual gloss: 91%

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 6015)

Technical Opinion:

Suitable for OUTDOOR USE

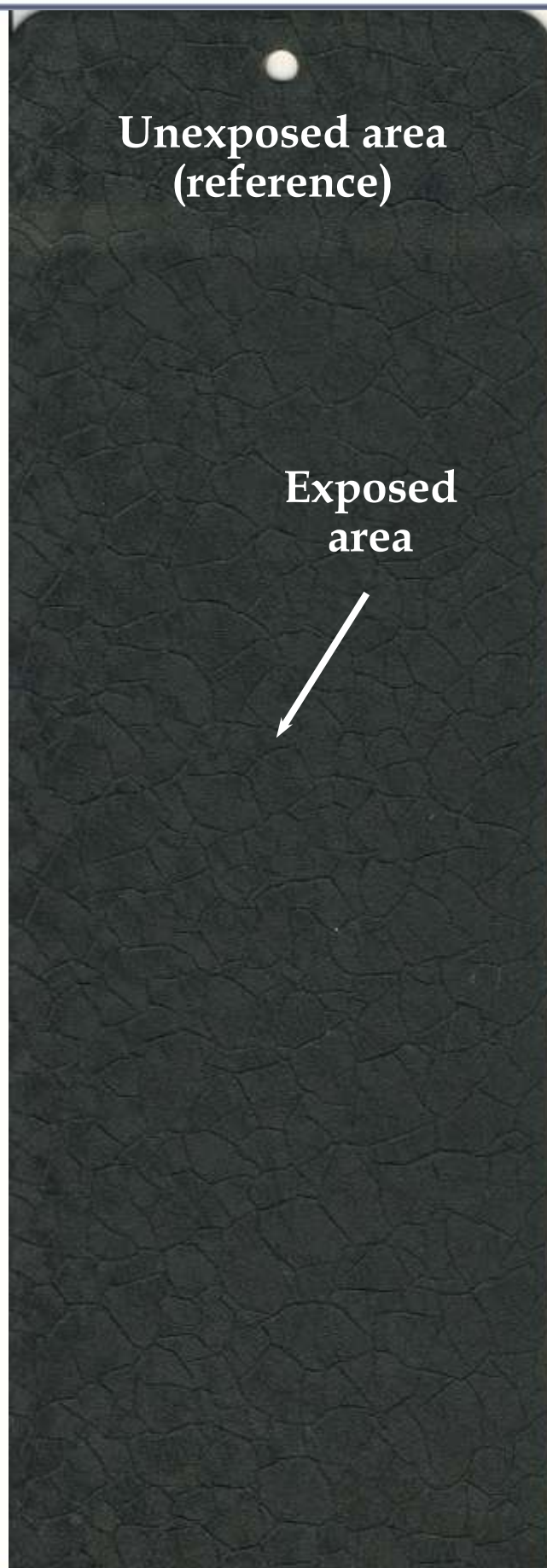
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29200
POWDER COATING: Saltlake-015
HEAT TRANSFER FILM: --
Colour variation (ΔE): 0,66
residual gloss: 67%

Technical Remarks

Good residual gloss and low colour variation (ΔE)
(\pm RAL 8017)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.

The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29201
POWDER COATING: Saltlake-016
HEAT TRANSFER FILM: --
Colour variation (ΔE): 1,18
residual gloss: 100%

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 5022/4007)

Technical Opinion:

Suitable for OUTDOOR USE

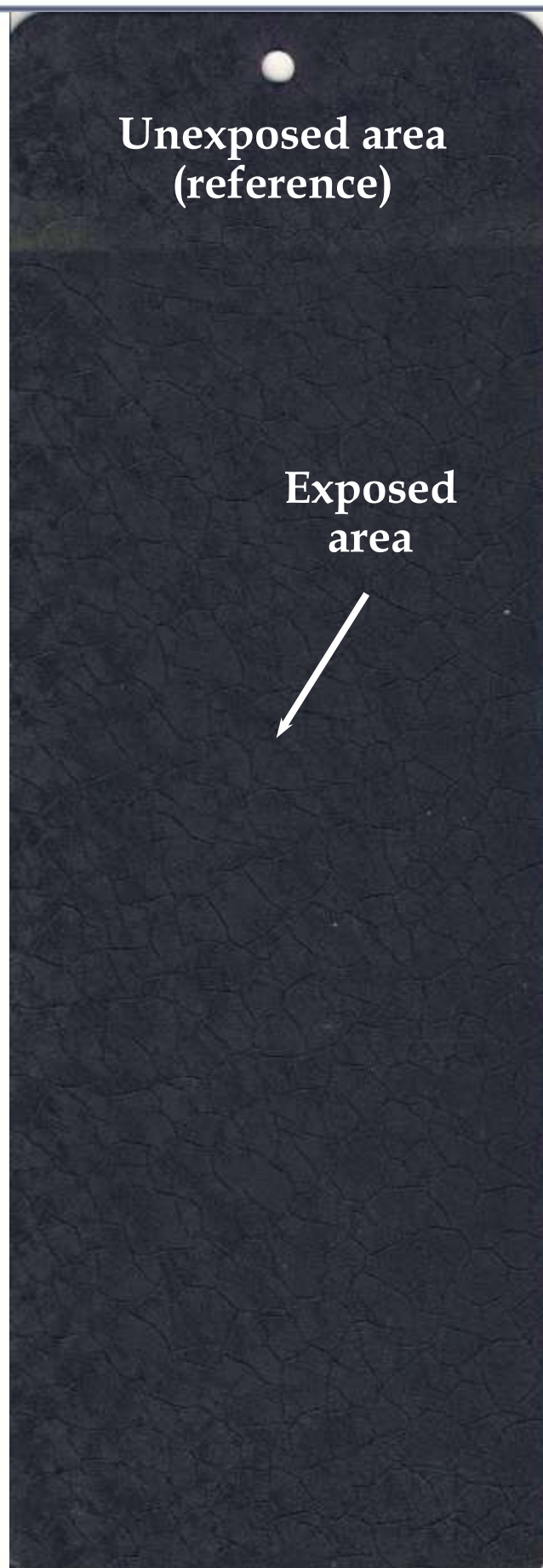
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29202
POWDER COATING: Saltlake-017
HEAT TRANSFER FILM: --
Colour variation (ΔE): 3,26
residual gloss: 100%

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 2001)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29203
POWDER COATING: Saltlake-018
HEAT TRANSFER FILM: --
Colour variation (ΔE): **1,41**
residual gloss: **100%**

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 3011)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29204
POWDER COATING: Saltlake-019
HEAT TRANSFER FILM: --
Colour variation (ΔE): **1,82**
residual gloss: **77%**

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 1004)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29205
POWDER COATING: Saltlake-020
HEAT TRANSFER FILM: --
Colour variation (ΔE): 1,5
residual gloss: 52%

Technical Remarks

Sufficient residual gloss and low colour variation (ΔE)
(\pm RAL 3011)

Technical Opinion:

Suitable for OUTDOOR USE

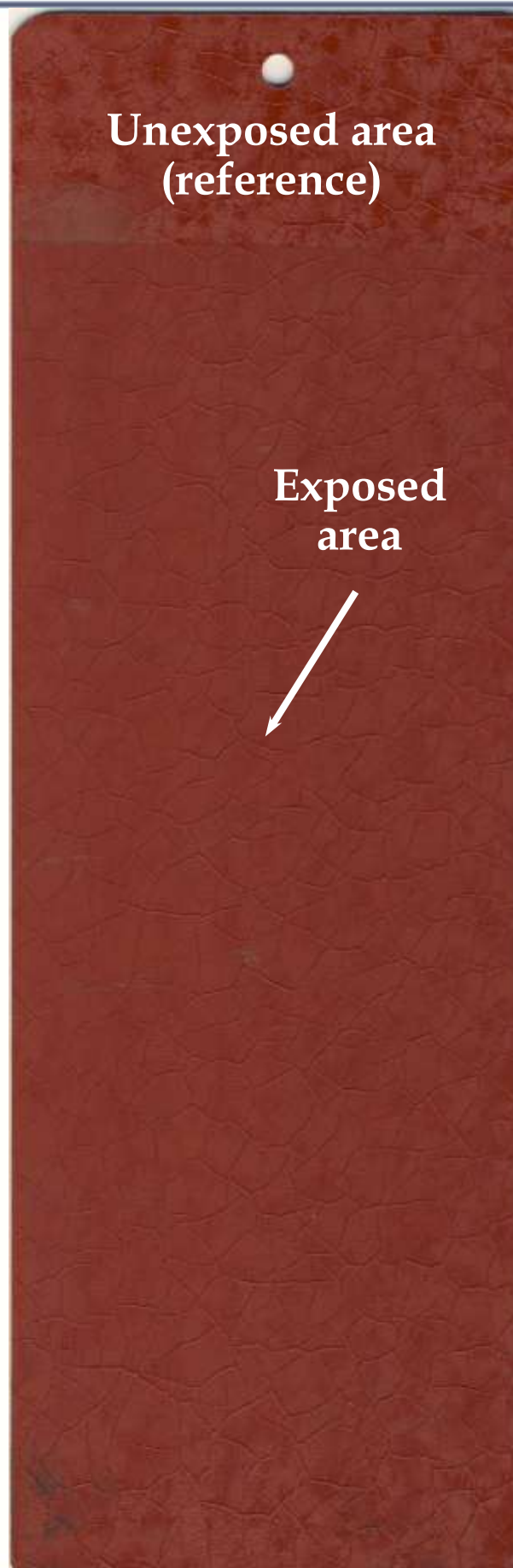
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29552
POWDER COATING: Saltlake-021
HEAT TRANSFER FILM: --
Colour variation (ΔE): **2,66**
residual gloss: **59%**

Technical Remarks

Sufficient residual gloss and low colour variation (ΔE)
(\pm RAL 5003)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29207
POWDER COATING: Saltlake-022
HEAT TRANSFER FILM: --
Colour variation (ΔE): 3,55
residual gloss: 78%

Technical Remarks

Good residual gloss and low colour variation (ΔE)
(\pm RAL 6018)

Technical Opinion:

Suitable for OUTDOOR USE

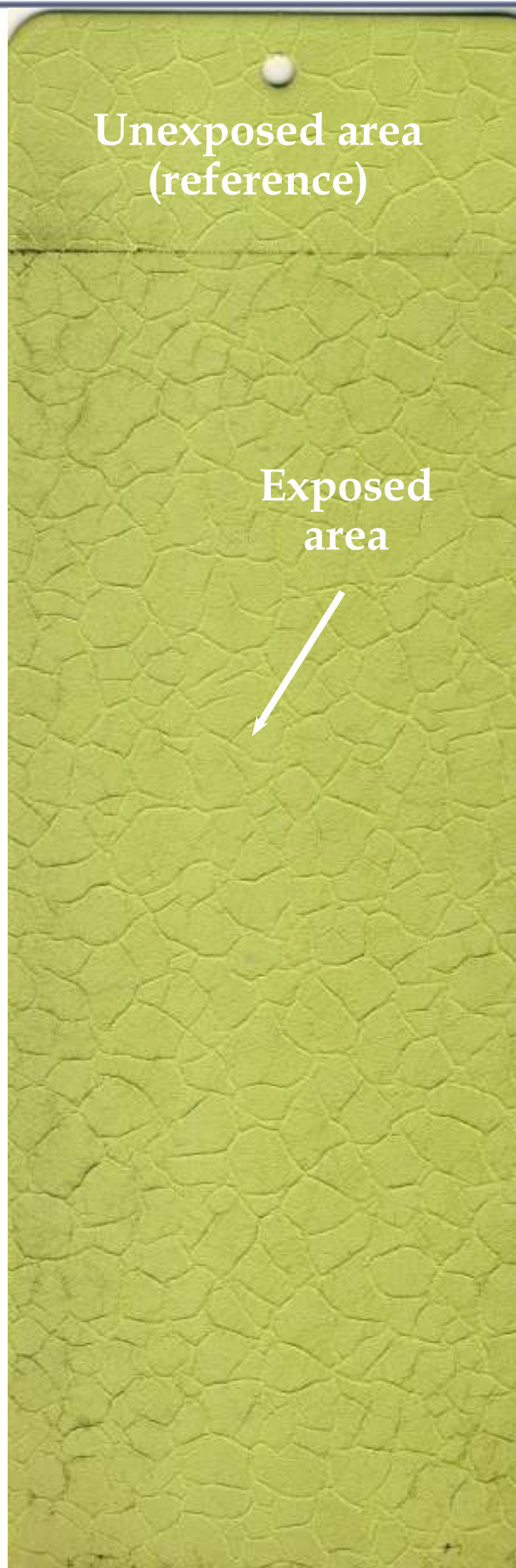
Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**





**Florida
Test**



**Total duration:
12 months**



EXPOSURE PERIOD:

FROM: 03/04/2013

TO: 01/04/2014

LAB. ID NUMBER: 29208
POWDER COATING: Saltlake-023
HEAT TRANSFER FILM: --
Colour variation (ΔE): 4,8
residual gloss: 83%

Technical Remarks

Excellent residual gloss and low colour variation (ΔE)
(\pm RAL 5007)

Technical Opinion:

Suitable for OUTDOOR USE

Test was carried on samples prepared according to technical specifications supplied by raw materials manufacturers.

QUALICOAT REQUIREMENTS

The residual gloss shall be at least 50% of the original gloss.
The ΔE values shall not exceed the maximum values prescribed in the annexed table (see Appendix A7 of Qualicoat Specifications).

**Unexposed area
(reference)**

**Exposed
area**

