



Testing Data

MKF-65 Rev 01012015

For: EOS Surfaces, Inc
301 E 20th Street
Norfolk, VA 23517

Plant Contact: Ken Trinder
Date: 8/20/2010
Test Report: 277129R2

Background:

EOS Surfaces, Inc submitted 2 recycled glass countertop samples for evaluation, Per Elite Green Certification. The units were delivered by customer--supplied carrier in good condition. All testing and sample preparation was performed by and/or supervised by Elite Global Testing.

The following information is provided:

Order Entry Log Date: 7/27/10
Collection Date: 7/19/10

Log No.: 277129
Elite Global Inspector: Kevin Stanley

Product Identification:

Marina / St Lawrence manufactured by EOS Surfaces. *Aspen for hardness test only.*

Test Instructions:

Test to the methods of ANSI/ICPA SS-1-2001.

Scope & Purpose:

Determine if product meets requirements of VOC for Elite Green

Preparation:

ANSI/ICPA SS-1-2001
ANSI Z124.6
3.1 Unit washed with liquid detergent and water, rinsed and dried. ANSI/ICPA SS-1
5 Structural Integrity
6 Physical Characteristics of Materials

Test Procedures:

ANSI /ICPA SS-1-2001
Section 5: Para. 5.1 through 5.3
Section 6: Para. 6.1 through 6.7
Section 7: Para. 7.1 through 7.2

Test Results:

The results of testing are provided in the attached data report.

CONCLUSION:

The St Lawrence samples Tested, Meet the Requirements of Low-VOC Emissions, per Elite Green and in compliance with ANSI Z124.3

All data includes results for BOTH samples, except where otherwise noted. Note: "We certify that all portions of each test performed were under continuous, direct supervision of this laboratory."



Testing Data

SAMPLE NUMBER: 0215-01
VOLATILE ORGANICS

SAMPLE ID: MARINA
METHOD: 624

ANALYST: NS

PARAMETERS	PREP DATE	ANALYSIS	DILUTION	DETECTION
	RESULTS	BATCH ID	FACTOR	LIMIT Ug/kg
Acrolein	8/19/2010	8192010	1	50.00 <50.0
Acrylonitrile	8/19/2010	8192010	1	50.00 <50.0
Benzene	8/19/2010	8192010	1	5.00 25.80
Bromoform	8/19/2010	8192010	1	5.00 <5.00
Butyl Acetate	8/19/2010	8192010	1	5.00 <5.00
Carbon Tetrachloride	8/19/2010	8192010	1	5.00 <5.00
Chlorobenzene	8/19/2010	8192010	1	5.00 <5.00
Chlorodibromomethane	8/19/2010	8192010	1	5.00 <5.00
Chloroethane	8/19/2010	8192010	1	10.0 <10.0
2-Chloroethylvinyl Ether	8/19/2010	8192010	1	10.0 <10.0
Chloroform	8/19/2010	8192010	1	5.00 <10.0
Dichlorobromomethane	8/19/2010	8192010	1	5.00 <10.0
1,1-Dichloroethane	8/19/2010	8192010	1	5.00 <5.00
1,2-Dichloroethane	8/19/2010	8192010	1	5.00 <5.00
1,1-Dichloroethylene	8/19/2010	8192010	1	5.00 <5.00
1,2-Dichloropropane	8/19/2010	8192010	1	5.00 <5.00
1,3-Dichloropropylene	8/19/2010	8192010	1	5.00 <5.00
Ethylbenzene	8/19/2010	8192010	1	5.00 31.00
Methyl Bromide	8/19/2010	8192010	1	10.0 <10.0
Methyl Chloride	8/19/2010	8192010	1	5.00 <5.00
Methylene Chloride	8/19/2010	8192010	1	5.00 <5.00
Methyl Ethyl Ketone	8/19/2010	8192010	1	50.0 <50.0
Styrene	8/19/2010	8192010	1	5.00 <5.00
1,1,2,2-Tetrachloroethane	8/19/2010	8192010	1	5.00 <5.00
Tetrachloroethylene	8/19/2010	8192010	1	5.00 <5.00
Toluene	8/19/2010	8192010	1	5.00 28.00
1,2-Trans-Dichloroethylene	8/19/2010	8192010	1	5.00 <5.00
1,1,1-Trichloroethane	8/19/2010	8192010	1	5.00 <5.00
1,1,2-Trichloroethane	8/19/2010	8192010	1	5.00 <5.00
Trichloroethylene	8/19/2010	8192010	1	5.00 <5.00
Vinyl Chloride	8/19/2010	8192010	1	10.0 <10.0
Xylenes, Total	8/19/2010	8192010	1	10.0 39

STANDARD ANSI /ICPA SS-1-2001 SOLD SURFACE MATERIALS

2.1 Materials: Solid Surface	COMPLIES
2.2 Dimensional Tolerances: Finished Size:	N/A
2.3 Units For Testing: Selected by Kevin Stanley for Tests	COMPLIES
2.4 Installation Instructions:	N/A
2.5 Care and maintenance instructions:	N/A
2.6 Identification:	COMPLIES

Section 4 WORKMANSHIP and FINISH

ANSI Z124.6 - Section 3

3.1 Unit Preparation: The unit was washed with liquid detergent and water solution, rinsed with clear water and, dried.

3.2 Inspection of unit surface: The unit was Inspected with the unaided eye from a distance of 1 to 2 feet with a light source of 150 ± 50 foot candles.

3.3 Surface Test: No defects were found. **COMPLIES**

3.3.1 The entire finished surface of unit was rubbed with a 50% solution of tap water and black washable ink, rinsed and dried.

3.3.2 The unit was inspected for cracks, chipped areas and blisters. None were found.

3.4 Subsurface Test: **COMPLIES**

3.4.1 Any finish surfaces which demonstrates visual surface irregularities or distortions or which fails the surface test per 3.3 shall be subjected to the standard dirt test.

3.4.2 Test method: One area inside the bowl (nominal functional area), was conditioned by rubbing for 25 cycles with normal hand pressure using a 600 grit wet silicone carbide abrasive paper, rinsed with water, dried and soiled by applying 5 grams of standard dirt to the area and rubbed with a dampened chamois with heavy thumb pressure in circular motion for 25 cycles. The dirt allowed to dry for 1 hour and then washed by rubbing clean with a dampened chamois and standard liquid detergent before visual inspection.

3.4.3 Requirement: There shall be no visible voids larger than $1/16"$ in diameter below the original finish surface.

Maximum allowable number of voids smaller than $1/16"$ for the conditioned area is 4. There were no visible voids observed.

5.3 Impact Test **COMPLIES**

A 1 - $1/2"$ steel ball, weighing $1/2$ lb. was dropped from a height of 24" - within 2 inches of the center of the seam. The unit showed no signs of failure.

5.3.2 Knife Drop Test - ANSI Z124.6 Section 4.2.2 **COMPLIES**

A 1 ounce steel knife was dropped, tip down, from a height of 24" at two different points on the bottom of the unit. There were no signs of cracks or fractures.

5.3.3 Skillet Drop Test - ANSI Z124.6 Section 4.2.3 **COMPLIES**

A 10 $1/2"$ diameter cast iron skillet weighing 4.5 pounds was dropped on two points on the unit from a height of 12 inches. There were no signs cracks or fractures .

6 Physical Characteristics of Material

6.1 Colorfastness and Aging

COMPLIES

Two samples were taken from the unit. One sample was tested for 200 hours in an Atlas Weatherometer in accordance with ASTM D 2565. The black panel temperature was maintained at $145 \pm 9^{\circ}\text{F}$. The other sample was retained as the control specimen. Requirements: The exposed specimen was compared to the control specimen for change in color or surface texture using the same light source as specified in paragraph 3.2. There was no significant change in color or surface texture. Max allowable color change = 2 CIE Units Change in color Results:

Marina: 0.84 CIE Units

St Lawrence: 0.95 CIE Units

5.2 Stain Resistance Test: - ANSI Z124.6 Section 5.2

COMPLIES

5.2.1 Two drops of the following stains listed were placed on prepared samples from the unit. One sample with reagents was covered and the other left uncovered, both for a period of 16 hours. The samples were then cleaned and rated.

Marina received a rating of 31 out of a maximum allowable rating of 64. St Lawrence received a rating of 31 out of a maximum allowable rating of 64.

Marina / St Lawrence

Covered

2/2

1/1

1/2

2/2

2/1

1/1

1/2

1/1

2/2

1/1

Reagent

Black crayon

Black liquid shoe polish

Blue washable ink

Gentian violet solution

Beet Juice

Grape Juice

Lipstick

Hair dye

Mercurochrome

Wet Tea Bag

Marina / St Lawrence

Uncovered

1/1

2/2

1/1

2/2

2/2

2/1

1/1

2/2

2/2

2/2

6.2 Stain Resistance Test

6.3 Cigarette Burn Test - ANSI Z124.6 Section 5.4

5.4 Cigarette Test:

COMPLIES

Three different brands of lighted cigarettes, were placed on the samples removed from unit, 1" from edge and allowed to burn for 2 minutes. The cigarettes were removed and the samples were allowed to cool. The burned areas were wiped with a clean cheesecloth and sanded to remove stains. There was no ignition or progressive glow during or after contact with the cigarettes and a polishing compound restored the samples to their original finish appearance. **Serviceability of unit was not impaired.**

6.4 Chemical Resistance - ANSI Z124.6 Section 5.5

5.5 Chemical Resistance Test:

COMPLIES

Two drops of each of the following reagents were placed on specimens removed from unit. One set of specimens with the reagents were covered, the other set of specimens were left uncovered, for a period of 16 hours. The excess reagents were removed and the specimens held 24 hrs .at $74.3^{\circ} \pm 3.6^{\circ}\text{F}$ and 50% humidity.

The surface finish of the specimens was unaffected and polishing brought back the original appearance.

Naphtha	Lye	Amyl Acetate	Household Ammonia
Citric acid	Urea	Acetone	Sodium Hypochlorite
Phenol Solution	Toluene	Ethyl Acetate	Ethyl alcohol
Trisodium Phosphate	Vinegar	Pine Oil	Hydrogen Peroxide

6.5 Heated Pan Test - ANSI Z124.6 Section 5.6

5.6 Heated Pan Test

COMPLIES

An aluminum disk was heated and maintained at 365°F and placed on the unit for 10 minutes then removed for 15 minutes three times. After the third placement, the unit was allowed to cool to ambient temperature for four hours then inspected. **No defects were observed.**

6.7 Water Resistance Test

COMPLIES

The sample was installed as specified in Section 6.7.1 and water was impinged for 1 ½ minutes at 190°F and at 1 gallon per minute on the surface 1 1/2" from the edge. This was immediately followed by 70°F water for 1 ½ minutes at the same point. This was performed 250 cycles. At the end of the 250 cycles, the unit was inspected for defects and none were found. An additional 1,750 Cycles were applied to each unit, no defects were found.

7 Ability to be Fabricated and Renewed - Not Applicable due to Decorative Nature of Sample

Additional Tests: Aspen

Tests	Method	Result
Izod Impact Strength	ASTM D256	N/A
Barcol Hardness	ASTM 2583	83.8 avg
Abrasion Resistance	ASTM D4060	5,000 Cycles 0.907g