

## TEST REPORT

### **VIRO FIBER**

**Attn: Mr. Johan Yang**  
**21011 ITASCA STREET UNIT C**  
**CHATSWORTH CA 91311**

**TEST NUMBER: AQ22655**

**CLIENT REFERENCE: P.O. # No Reference**

**Quote dated 8/11/06**

**Client Code 'VIRO'**

**REPORT NUMBER: 5**

**EXPOSURE START DATE: September 28, 2006**

**REPORT INTERVAL: 1550 MJ UV of 1550 MJ UV**

**Date: March 09, 2008**

*This Report Contains 1 Test Part*

*Reviewed By:*

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Marge Awarski  
Group Leader  
Evaluation Services

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**GOVERNING STANDARDS****Exposure****ASTM G 147 - 02**Standard Practice for Conditioning and Handling of Nonmetallic  
Materials for Natural and Artificial Weathering Tests**ASTM G 90 - 05**Standard Practice for Performing Accelerated Outdoor Weathering of  
Nonmetallic Materials Using Concentrated Natural Sunlight**Evaluation****ASTM D 1729-96(2003)**Practice for Visual Appraisal of Color and Color Difference of  
Diffusely-Illuminated Opaque Materials**ASTM D 661-93 (2005)**

Method for Evaluating Degree of Cracking of Exterior Paints

**EXPOSURE MEASUREMENT DATA**

Exposure testing is performed in New River, AZ, in accordance with ASTM G90, SPRAY CYCLE 1 (EMMAQUA, day spray with night time wetting). The specimens are mounted unbacked in an aluminum frame, with the smooth side facing the sun.

**VISUAL MEASUREMENT DATA**

General visual evaluations are performed in accordance with client instructions. Specimens inspected indoors are illuminated by overhead Macbeth D65 fluorescent lamps simulating average daylight, with illumination between 810 lux and 1880 lux. The surround and ambient field of the inspection area are neutral gray in color. Please refer to the governing standards section of this report for further details.

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**PHOTO MEASUREMENT DATA**

Photos are taken of the specimens with a matte gray card placed underneath the specimens.

**VISUAL CODE LEGEND**

COLOR CHNGE UNWSH = VISUAL COLOR, UNWASHED AREA  
CRACK UNWSH = CRACKING, UNWASHED AREA  
CRAZE UNWSH = CRAZING, UNWASHED AREA

**RATING SCALES**

**CHECKING TYPE**

A= long line  
B= irregular  
C= short parallel  
D= short random  
E= crowsfoot

**CRACKING TYPE**

F= switch  
G= sigmoid  
H= shrinkage  
J= mosaic  
A= long line  
B= irregular  
G= sigmoid

	<b>ASTM</b>		<b>VISUAL COLOR</b>
10	None	B	Bleaching
8	Trace	D	Darkening
6	Slight	F	Fade
4	Moderate	BR	Bronzing
2	Severe	M	Mottled
0	Failure	Y	Yellowing
		G	Greying
		DC	Discolor

**GENERAL OBSERVATIONS, DEVIATIONS, OR WAIVERS**

*Notes contained in relevant documents are an integral part of a test, and shall be included by the client in discussions, correspondence, and presentation of test results to a third party. This Test Report represents only one part of the test documentation. Interim reports and other test documentation may have been submitted prior to this date. Test results reported are pertinent only to the items tested and are not relevant to other specimens of the same type, or in the same lot, which are not being tested. Test Reports, and/or other pertinent test documentation, shall not be reproduced, except in full, without the written approval of Atlas Weathering Services Group and so certified by the client.*

**VIRO FIBER**

Test Number: AQ22655  
Report Number: 5  
Test Part: 1 of 2  
Date: March 09, 2008

**TEST PART 1**

**EXPOSURE DATA**

**Location:** New River, Arizona  
**Exposure Period:** September 28, 2006 to March 09, 2008  
**Type of Test:** EMMAQUA

**Radiant Energy:** Total: 58,156 MJ/m<sup>2</sup>; 1,389,972 Langley's  
UV: 1,550 MJ/m<sup>2</sup> (295-385 nm)

**OBSERVATIONS, DEVIATIONS, OR WAIVERS**

Crazing is evaluated using 10X magnification.

05/14/07 - 620 MJ UV Inspection

The cracking noted on specimens 1 is perpendicular to the long dimension of the sample. It is located in the area over the crossbar supports.

**VIRO FIBER**

Test Number: AQ22655  
Report Number: 5  
Test Part: 1 of 2  
No. of Specimens this Part: 9  
Type of Test: EMMAQUA

Date: March 09, 2008

**VISUAL EVALUATION RESULTS**

SPECIMEN NUMBER	COLOR		
	CHNGE	CRACK	CRAZE
	UNWSH	UNWSH	UNWSH
Evaluation Interval:	1550 MJ	UV OF	1550 MJ UV
1 1550UV	10	A,B7	C5
2 1550UV	10	A,B6	C5
3 1550UV	9D	10	10
4 1550UV	9D	10	10
5 1550UV	9G	10	10
6 1550UV	10	10	10
7 1550UV	9D	10	10
11 1550UV	10	10	10
12 1550UV	8D	10	10



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ISO/IEC 17025  
CERT # 717.01

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