



ATOFINA

atoglas division

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Test Report

Accelerating Weathering Evaluation
5000 Hours Xenon-Arc Weatherometer Exposure
Crystal View™ Acrylic Block Window
May 21, 2002

Prepared for:

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TEST DESCRIPTION

Atoglas Exposure# X5082
Test Specimen: Crystal View™ acrylic block window provided by customer
Test Method: ASTM G155-00a (5000 Hours)
Exposure Start Date: 7/20/01
Exposure Completion Date: 4/30/02
Total Irradiation @ 340 nm: 4725 KJ/m²

SUMMARY

We have completed the accelerated weatherability testing of your Crystal View™ acrylic block product sample. The sample has been exposed in our laboratory's Atlas Xenon Ci-5000 weatherometer for a duration of 5000 continuous hours with the weep port orientated downward and the thermal insulator side of the window assembly facing the xenon lamp and deionized water spray. This test method is commonly used to simulate the synergistic effects from sunlight, heat, and moisture of a long-term outdoor exposure in Southern Florida type climates.

EXPOSURE CYCLE DETAILS

Atlas Ci-5000 Water Cooled Xenon-Arc Weatherometer
ASTM G155-00a (5000 Hours)

Cycle	Inner and Outer Xenon Burner Filters	Irradiance	Wavelength	Exposure Cycle
2	Borosilicate Glass (Daylight)	0.35 W/m ² /nm	340 nm	-102 min light at 63°C, 50% RH -18 min light and water spray - 6 hour dark, 95% RH

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VISUAL OBSERVATIONS

Crystal View™ Acrylic Block Window after 5000 Hours Exposure Testing

Colorless Acrylic Window	
Condensation	None
Clarity	Good
Discoloration	None
Distortion	None
Yellowing	None
Crazing	None
Bloating	None
Cave In	None
Siliconized Rubber Grout	
Color Stability	Good
Flexibility	Good
Shrinkage	None
Bubbling	None
Mildew	None
Aluminum Frame	
Warpage/Separation	None
Deterioration	None
Paint Gloss Retention	Fair
Paint Chalking	None

Visual Rating Key: Good – Fair – Poor – None

REMARKS

At 3910 Hrs, the sample was discovered damaged by a steel air deflector located near the weatherometer's revolving test rack. The lower section of the sample's aluminum frame had been repeatedly scraped during testing. The sample was subsequently rinsed with deionized water and continued testing for the final exposure duration.

CONCLUSION

At the final 5000 hour exposure interval, a total irradiation level of 4725 KJ/m2 had been accrued. Based upon our experience with this type of accelerated testing, we would expect this sample to perform very well during 8 - 10 year real time outdoor weatherability testing in South Florida.

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