

Background

One of the most potent health hazards found in homes and offices nationwide is formaldehyde, a common indoor air pollutant. This emitting gas can irritate the eyes, nose, throat and lungs, and experts believe exposure can cause cancer.



The most offensive, are pressed wood products such as furnishings made from plywood, particleboard and medium-density fiberboard. Mirasol[®] Shutters have long been recognized as a consistent leader in quality and performance. To maintain these attributes the proprietary and unique formulation used in production has been improved over the years, but since inception, have always been environmentally compatible. Now, as governmental regulatory agencies are about to establish environmental protocols for air toxicity, Mirasol Shutters can boast that its formulation is also ready to meet or exceed these same protocols. Manufactured under ITA's GreenAssured[®] program, Mirasol Shutters join a growing number of environmentally compatible window fashion products from ITA. ITA developed and implemented the GreenAssured program in response to growing awareness of the effects of airborne chemicals including formaldehyde on indoor air quality.

Green Assured[®] Test Methodology

Technical testing was conducted by Air Quality Sciences, Inc., an independent laboratory and an ISO 9001-2001 accredited firm. Using internationally recognized protocols, each product was carefully inspected upon arrival and stored in a controlled environment until testing. Using specific and precise procedures, component parts of each product were loaded into the SA5 environmental chamber with all sides exposed for individual testing. The environmental chamber test follows ASTM D 5116 while the analysis is based on EPA IP-6A and ASTM D 5197 for formaldehyde by high performance liquid chromatography.

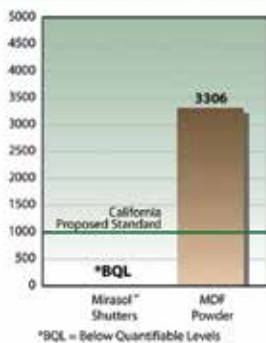
Test Results

Sample ID: Mirasol Shutters

Test Conclusion

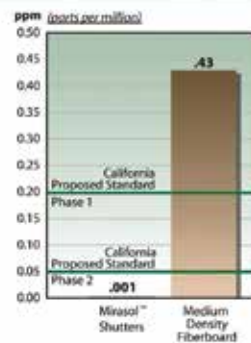
Mirasol Premier Performance and Mirasol Classic Shutters boast a formaldehyde safe formulation that meets or exceeds proposed environmental protocols for air toxicity.

Formaldehyde Predicted Air Concentration



The Predicted Air Concentration Test is a prediction, based upon a standard room environment with normal air flow, to assess how much emitted gas a person in the room would be exposed to from the product.

Formaldehyde Emission Factor



The Formaldehyde Emission Factor is a chemical emission test that measures the amount of pollutant (*micrograms of formaldehyde per sq. meter per hour*) off-gassing from the product tested. The exposure data is collected during a 4-hour elapsed time period in a controlled environment.

Test Criteria: The State of California is planning to introduce regulations over several years. Phase 1 proposals are that medium density fiberboard (MDF) must meet 0.19 ppm maximum by July 1, 2008. Phase 2 proposals suggest that MDF must meet 0.05 ppm maximum by July 1, 2012.



Mirasol[®]
Shutter Collections

Classic
Premier

Energy Savvy[®]
Technical Data

Background

The U.S. Department of Energy reports that louvered window shutters will help prevent heat gain and loss in an interior environment. Mirasol[®] shutters are engineered with a closed-cellular composite material featuring an extremely rugged cap stock. The result is a beautiful and functional shutter that helps maintain energy efficiency and prevent unwanted heat loss or gain. Now, with ITA's proprietary Energy Savvy program, Mirasol shutters are scientifically certified to meet rigorous energy savings criteria. The Energy Savvy program is maintained through rigorous testing using scientifically recognized protocols. Manufactured under the Energy Savvy program, Mirasol shutters are the first certified energy-efficient window fashion products within the ITA brand.



Energy Savvy[®] Test Methodology

The test objective was to measure heat transfer through a fixed-size window covered by a framed Mirasol shutter. The shutter featured 3.5" louvers in various open positions. Test conditions created a controlled outside temperature while measuring the rise in temperature inside the test chamber. A window of 32" wide x 28" high, with clear single pane glass, was mounted in the wall between the heat and comfort sections, with the heat section warmed by infrared heat lamps of 750 watts. The heat section was brought up to 100°F, +/-1° and maintained there via digital remote thermometer. The comfort section was fitted with a circulating fan for even heat distribution and alternate heat source for elevating comfort temperature to 72°F to start each test. The comfort area temperature was recorded every 10 minutes with a remote digital thermometer until stabilized at 90 minutes.

Test Results

Sample ID: Mirasol Shutters

Louver Position				Test Conclusion
Time	Full Open	1/2 Open	Full Closed	
0 min	72.0°F	72.0°F	72.0°F	In the heat transfer test, area temperature difference between the room protected with Mirasol Premier Performance and Mirasol Classic Shutters closed (74.3°F) and the room with Mirasol Premier Performance and the Mirasol Classic Shutters open (81.7°F) was 7.4°F(9%), with a corresponding reduction in energy consumption reduction in energy consumption of up to 10%
30 min	79.7°F	76.6°F	73.1°F	
60 min	81.0°F	78.0°F	73.6°F	
90 min	81.7°F	78.6°F	74.3°F	
O/All Increase	9.7°F	6.6°F	2.3°F	

Energy Savvy[®] test results for Mirasol Premier Performance and Mirasol Classic Shutters are determined in a controlled environment. Actual results will vary from region to region and depend on climate, type of heating and cooling system, and the type of window and exposure covered.



www.itainc.net

www.mirasolshutters.com
9 West Tower Circle, Ste. A
Ormond Beach, FL 32174
P: 386.301.5172
F: 386.366.8070

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Background

ITA's FR Assured® program comprises an advanced flame retardant (FR) treatment technology as the basis for a specialized grade of window coverings, accompanied by a testing and certification program for meeting national and international FR standards. The program was developed in response to growing public awareness and concern about consumer product safety, as well as increasing state and federal fire safety regulations covering residential and commercial window treatments.

FR Assured®

FR Assured® Test Methodology

ITA's FR Assured program covers both hard and soft window coverings, and is supported by rigorous testing in accredited, independent laboratories, using officially recognized protocols. The primary testing methodology is the NFPA 701-89 (2004 Edition) standard of the U.S. National Fire Protection Administration. This procedure measures the ability of test samples of a material to prevent the propagation of fire after exposure to a flame for 12 seconds.

To pass the NFPA 701 test and achieve FR Assured certification, all specimens of the sample material must meet the following criteria:

- Fragments or residues of specimens that fall to the floor of the test chamber shall not continue to burn for more than an average of 2 seconds per specimen for the sample of 10 specimens.
- The average weight loss of the 10 specimens in a sample shall be 40% or less.
- No individual specimen's mass loss percent shall deviate more than 3 standard deviations from the mean for the 10 specimens.

Test Results

Sample ID: Mirasol Shutters – Premier & Classic

Specimen	Orig Wt. (grams)	Post Wt. (grams)	After Flame (seconds)	Residues (seconds)	Wt. Loss (percentage)	Test Conclusion
1	576.2	570.5	0.0	0.0	1.0	The submitted sample meets the requirements of NFPA 701 Test Method 1-2004 Edition, when tested in the original state. Testing performed by SGS US Testing Company Inc., a certified and independent laboratory.
2	586.7	581.6	0.0	0.0	0.9	
3	575.3	569.3	0.0	0.0	1.0	
4	599.6	593.1	0.0	0.0	1.1	
5	578.7	572.5	0.0	0.0	1.1	
6	584.0	579.3	0.0	0.0	0.8	
7	586.4	581.2	0.0	0.0	0.9	
8	593.0	586.3	0.0	0.0	1.1	
9	572.4	567.5	0.0	0.0	0.9	
10	585.5	582.0	0.0	0.0	0.6	
			Average	0.0	0.9	
			3*STDEV	0.0	0.4	
			AvG+3*STDEV	0.0	1.4	