



MATRIX, INC. • 537 SOUTH 31st STREET • MESA, ARIZONA 85204, U.S.A. • 602-832-1381

April 27, 1988

Report No. 10-503 to: Hendee Enterprises, Inc.
 9401 Center Point
 Houston, Texas 77054

Subject of Report: Solar Heat Control Properties
 of One Shade Fabric

Fenestration data were obtained on the fabric by Matrix, Inc. at its Mesa, Arizona solar laboratory on April 26, 1988. The sample was tested in accordance with ASHRAE Standard 74-73, "Method of Measuring Solar-Optical Properties of Materials".

The solar transmittance (T_s), solar reflectance (R_s), solar absorptance (A_s), visible transmittance (T_v) and the Openness-Factor (O-F) were determined for the fabric alone by direct measurement at 0° profile angle. The Shading Coefficient (SC) for each sample was determined when used with 1/8 inch clear glass, 1/4 inch clear glass and 1/4 inch heat absorbing glass. The test data and calculated results are presented below. The T_s , R_s , A_s , T_v and O-F values are expressed as percentages.

SOLAR HEAT CONTROL PROPERTIES OF
 SHADE FABRIC

Description	T_s	R_s	A_s	T_v	O-F	----Shading Coefficient w/----		
						<u>1/8"Clear</u>	<u>1/4"Clear</u>	<u>1/4"H.A.</u>
Enduro Silver 80% Shade Cloth	25	18	57	25	25	0.33	0.32	0.30

Certified by:

Donald D. Pershing
 Donald D. Pershing, President
 Matrix, Inc.

APR 29 1988

**DEFINITION OF SOLAR-OPTICAL PROPERTIES AND HEAT CONTROL
PROPERTIES OF WINDOW GLAZING SYSTEMS
(information provided by Matrix, Inc.)**

Fenestration Data

An architectural term used in describing the data used in proportioning of windows and the factors that influence the admittance of energy through the glass and its effect on the building interior.

Glaze

To glaze a window is to furnish it with glass or other material. The glass or other material may then be referred to as the glazing material. When drapes or other heat control devices are used in combination with the glass, the combination is referred to as the glazing system.

Solar Transmittance (Ts)

The ratio of the amount of total solar energy allowed to pass through a glazing system to the amount of total solar energy falling on the glazing system.

Solar Reflectance (Rs)

The ratio of the amount of total solar energy which is reflected outward by a glazing system to the amount of total solar energy falling on the glazing system.

Solar Absorptance (As)

The ratio of the amount of total solar energy which is absorbed by a glazing system to the amount of total solar energy falling on the glazing system (the portion of the solar energy which is reflected or transmitted).

Visible Transmittance (Tv)

The ratio of the amount of total visible solar energy which is allowed to pass through a glazing system. It is related to the amount of glare a person receives through a glazing system.

Openness Factor (O-F)

Refers to the ratio of open or interstice area to the total flat surface area of a drapery fabric or perforated material. This quantity relates well to the amount of solar heat admitted through a fabric or perforated material and to the extent to which discomfort results to individuals near the glazing system.

Shading Coefficient (SC)

Defines the sun control capability of the glazing system. It is expressed as the ratio of the solar heat gain through any given glazing system to the solar heat gain that would occur under the same conditions of the window under consideration were glazed with clear, unshaded, double strength window glass, designated DSA. It is utilized in the calculation of the solar heat gain and total heat gain of the glazing material or glazing system.

UV Transmittance (Tuv)

The transmittance of the glazing/product for the UV range of the solar spectrum. This value is used as a rating to determine the product/glazing effectiveness in guarding against UV degradation.