



# Mermet Corporation

5970 North Main Street

Cowpens, SC 29330

Final Report for:

Hande Manufacturing (China) CO., Ltd

No. 161 Yaotianhe Street, Yongshun Road, Yonghe Zone

Guangzhou Economic & Technological Development District

Guangzhou 511356 China

Test Method:

Fenestration testing based on ASTM E891, ASTM E 903-96 & Lawrence Berkeley  
National Laboratory (LBNL) WINDOW certified software

Samples received: 8/25/16

Testing initiated: 8/26/16

Testing completed: 8/30/16

Report issued: 9/12/16

Performed By:

Ali Fisher

Product Manager

**Objective:**

To evaluate the reflectance (Rs), transmittance (Ts), absorptance (As), visible light transmittance (Tv), visible light reflectance (Rv), and solar heat gain coefficient (SHGC) of the submitted test samples.

**Test sample description:**

Seven different samples of vinyl coated polyester fabric were sent for full fenestration and openness factor testing.

**Procedure:**

Reflectance and transmittance are measured using ASTM E 903-96 “Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.” The samples are tested using a Perkin Elmer Lambda 950 UV/Vis/NIR Spectrophotometer. Three representative swatches from each sample are tested for full fenestration testing and the results are averaged. Solar and light values are calculated using ASTM E891 “Tables for Terrestrial Direct Normal Solar Spectral Irradiance Tables for Air Mass 1.5.” Calculations for Rs, Ts, As, Tv, and Rv are rounded to the nearest whole number. Numbers are represented as percentages (i.e. the number 10 represents 10%). Openness factor is tested in accordance with EN 14500 “Thermal & Visual Comfort-Test & Calculation Methods”.

Solar heat gain coefficient (SHGC) is calculated using the Lawrence Berkeley National Laboratory (LBNL) WINDOW 7.4 NFRC certified software. SHGC percentage improvement for commercial applications is based on a standard commercial glass makeup of 6mm double glazing / ½” air / 6mm with Low E on surface #2 with the shade mounted in the interior. SHGC for residential applications is based on a default residential glass makeup of 3mm clear glass / ½” air / 3mm clear glass with the shade mounted in the interior. Results for SHGC are obtained using center of glass. Calculations for SHGC are represented in decimal format and rounded to the nearest one hundredth. These numbers represent percentages (i.e. the number 0.45 represents 45%).

The results stated in this report represent only the specific samples identified in the report tested in accordance with the aforementioned standards. Measurements performed in accordance with these same standards using additional samples with identical or nearly identical constructions may produce different results.

## Results:

Fabric Name	Color	OF	Fabric Properties					Fabric & Glass	
			Thermal			Optical		Commercial	Residential
			Rs	As	Ts	Rv	Tv	SHGC % Improvement	SHGC
Sunscreen Basket 3%	white/white	6%	68	8	24	77	21	55%	0.32
Good Day -Sunscreen Basket 5%	white/white	8%	67	7	26	75	23	53%	0.33
Sunscreen Flat Basket 10%	white/white	12%	62	7	31	70	28	47%	0.37
Sunscreen Flat Basket 5%	white/white	9%	65	8	27	74	24	53%	0.34
Sunscreen FB3	white/white	6%	68	7	25	76	21	55%	0.32
Sunscreen Twill 1%	white/white	2%	71	8	21	80	18	58%	0.29
Sunscreen Regular Twill 5%	white/white	6%	67	7	26	75	23	53%	0.33