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## Engineering Evaluation Report

Report No.: 510165A

**Manufacturer:** USA Shutter Company, LLC  
1455 Rail Head Blvd, Unit 6  
Naples, FL 34110

**Product Line:** Maestrosshield Maestran Security Shield

### **Compliance:**

The above mentioned products have been evaluated for compliance with the requirements of the Florida Department of Community Affairs for Statewide Acceptance per Rule 9B-72.070 method 1(d). The products listed herein comply with the requirements of the 2004 Florida Building Code, Building sections 1609, 1613, 1626, including the HVHZ.

### **Product description:**

**Mesh:** Mesh contains a 1500 denier aramid fiber core. Each aramid fiber is surrounded by six .2mm diameter grad 304 stainless steel strands. Fabric contains 520x390 strands per square meter and has a 27% porous or open area.

**Base support:** Base is made of aluminum angle 6063-T5

**Decorative base and cover:** Extrusions are made of 6063-T5.

### **Supporting Technical Documentation:**

1. Approval document: drawing number FL 00099, dated 3/28/07 sheets 1 thru 7, titled Maestrosshield Maestran Security Shield; prepared, signed and sealed by L. Roberto Lomas P.E
2. Test reports:
  - a. Report No.: 0432-0115-07, signed and sealed by Vinu J. Abraham P.E.  
Hurricane Test Laboratory, LLC  
Maestrosshield Maestran Security Shield  
TAS 201 and ASTM E 1886/E 1996, Large Missile Impact test, Level D, Wind Zone 4  
TAS 202 and ASTM E 330, Uniforms Static Load Test,  $\pm 70$  psf design pressure  
TAS203 and ASTM E 1886/E 1996, Cyclic Load Test,  $\pm 70$  psf design pressure
3. Anchor calculations and porosity calculations, report No.: 510164 prepared, signed and sealed by L. Roberto Lomas P.E.

### **Design pressure due to material porosity**

The Aramid Mesh system is 27% porous or open area. While applying the design pressure of 70psf a plastic film was placed over the Aramid Mesh transferring the load to 100% solid product area instead of 73%. The following equation is used to find the equivalent design pressure at 73% solid area:  $(70 \times 100) / 73 = 95.8$ psf. Therefore, the design pressure rating of this product with 73% solid area and 27% porous is 95psf.

### **Limitations and Conditions of use:**

- Maximum design pressure:  $\pm 95$ psf.
- Product may be installed horizontally or vertically.
- These products are rated to be used in the HVHZ.
- This product does not require impact protection in areas where wind borne debris protection is required.

### **Installation:**

Units must be installed in accordance with installation drawing FL 00099.

### **Certification of Independence:**

Please note that I don't have nor will acquire a financial interest in any company manufacturing or distributing the product(s) for which this report is being issued. Also, I don't have nor will acquire a financial interest in any other entity involved in the approval process of the listed product(s).

