

# Architectural Specification

## For Stainless Steel Hinged Door

### HVHZ Impact Rated / Solar / Security Screen

#### 1.0 GENERAL

#### 1.1 DESCRIPTION

Provide permanently installed Aluminum Framed with Stainless Steel Woven Mesh, Fixed Hurricane, Solar Energy Saving, and Security Screens. Screens and installation shall meet or exceed the State of Florida Building Codes acceptance number FL13771 as attached, meet or exceed attached Miami Dade Notice of Acceptance Number NOA 10-0706.05, be Miami Dade County Product Control Approved. Screens shall qualify under Homeland Security ANSI/SMA 6001-2002 (Metal Protection Screens): Allowable 800lb/in average 993 lb/. Product shall meet or exceed following American Test Procedures: - .TAS 201-94 (Impact Test Procedures): 2 large missile impacts per specimen. TAS 202-94, (Uniform Static Load):  $\pm 2394$  Pa ( $\pm 50.0$  psf) overload  $\pm 3591$  Pa ( $\pm 75.0$  psf). TAS 203-94 (Cyclic Wind Load):  $\pm 2394$  Pa ( $\pm 50.0$  psf). ASTM E 1886-05, (Cyclic Wind Load):  $\pm 3591$  Pa ( $\pm 75.0$  psf). ASTM 1996-05, (Impact Test Procedure): 2 large missile impacts per specimen. ASTM E 330-02, (Uniform Static Loads):  $\pm 2394$  Pa ( $\pm 50.0$  psf) overload  $\pm 3591$  Pa ( $\pm 75.0$  psf). NFRC201-2004, (Solar Heat Gain Coefficient): Percentage improvement 52%. ASTM E 972, (Solar Photometric Transmittance): Light reflectance percent increased 76%. ASTM E 1084, (Solar Transmittance): Light transmittance percent reduction 55%. WES 1584, (Thermal Transmittance Screen Only): Percentage reduction heat transfer 12.34%, NFRC 102-2004, (Thermal Transmittance): Percentage reduction heat transfer 10.67%. Product shall meet or exceed following Australian Test Procedures: - AS5039-2003, Security Screen Door and Security Window Grilles. AS5041-2003, Methods of Test Security Screen Doors and Window Grilles, 1. Dynamic Impact Test. 2. Pull Test. 3. Jemmy Test. 4. Shear Test. 5. Knife Shear Test. 6. Probe Test. 1000 Hours of Salt Spray Test. Product shall meet or exceed Model 29389 as Manufactured by Crimsafe North America LLC, 3020 Reynolds Road, Unit 1-5, Lakeland FL 33803, or approved equal as indicated in these specifications and drawings. Hurricane, Energy Saving and Security Screens shall provide continuous and easy window viewing as well as provide ventilation. Shutters or Screens that prohibit easy viewing and air ventilation shall not be accepted. Perforated or Expanded Metal Shutters/Screens, Solid Panel Shutters, Accordion, Electric or Pull down Shutters, Removable Screens shall not be accepted.

#### 1.2 SCOPE

All aluminum screen frames with stainless steel wire mesh units covered under this specification shall be of the fixed type, consisting of a main frame and stainless steel wire cloth. No plastic, steel or galvanized steel parts shall be accepted. Screens shall be permanently installed.

## 2.1 MATERIAL

### 2.2 MAIN FRAME

The main frame or sash is 0.7" depth x 2.8" in length and is extruded from 6063- T6 aluminum alloy with 0.416 lbs/ft. The nominal wall thickness of main frame is 0.05". The main frame is mitered on the corners and fitted with an internal extruded solid aluminum stake with a dimension of 2.95"x 2.95" x 0.63".

### 2.3 SUB FRAME

The hinged door frame shall be a pre hung build out and extruded from 6063- T6 aluminum alloy with 0.516 lbs/ft. The nominal thickness of the sub frame is 0.05". The sub frame is metered on the corners and fitted with an internal extruded solid aluminum stake with a dimension of 1.9" x 1.9" x 0.78".

### 2.2 HARDWARE

Each hinged screen door shall be furnished with a three point internally mounted multi point door lock system, polyester powder coated stainless steel hinges and pneumatic security screen door closer. Externally mounted 3 point lock system are not acceptable. Each hinged door shall have four stainless steel security hinges. The bottom of the door shall have an extruded aluminum adapter to accept a wool pile or weather-strip to act as a bug protector and a sweep. This adapter is to be field applied.

### 2.4 INFILL MESH

304 Grade High Tensile Stainless Steel 0.035" wire diameter with 10 strands on the weft and 10 strands on the warp for every square 1" of mesh. The mesh thickness is 0.063" and woven to ISO 9044/ ASTM E016-06 Standards. The open area space for the mesh is 41.6%. Stainless Steel Mesh is powder coated with ultra black low sheen to Australian Standard (AS4506-2005 Metal Finishing for thermoset powder coating). These standards set out relevant test procedures and specify performance requirements for thermoset powder coatings applied to metal substrates. Pre treatment system incorporates an 8 stage process also includes the alkaline cleaning and Chromating. Mesh to have passed independent laboratory testing for 10000 hours of salt spray.

### 2.5 INFILL ATTACHMENT

The mesh shall be attached to the main frame by a removable 6063-T6 aluminum extrusion clamp using 410 Stainless Steel tamper resistant security head screws. A Santoprene dissimilar metal separator shall be used between the mesh and main frame, an adhesive, waterproof Tesa Tape shall be used on the clamp side to separate dissimilar metals. The tamper resistant countersunk security screw shall penetrate the Clamp, Separators, Mesh and Main Frame at 1" from ends and 2" on centre.

### 2.6 ALUMINUM FINISH

Aluminum Extrusion is powder coated to American Architectural Manufacturers Association AAMA2603. Thermoset high durable powder coatings are applied to the Aluminum. American

Standards set out the test procedure and specify performance requirements for the thermoset powder coatings intended specifically for architectural application. Pre-treatment system incorporates a save stage process for the aluminum. The process breaks into Alkaline cleaning, Water Rinsing, Chromating, Water Rinse, Deionizer Water Rinse, and Drying & Coating.

### 3 PROUCT

#### 3.1 INSPECTION

Contractor to verify that openings fit allowable tolerances, are plumb, provide a solid anchoring substrate and comply with approved shop drawings. Verify size and location of each opening to be protected prior to fabrication.

#### 3.2 INSTALLATION

Engage experienced installer, trained by the manufacturer to perform work on this section. Install in accordance with approved shop drawings and specifications. The screen mainframes shall be reveal fitted using tamper resistant security head screws as per test specifications – main frame installation screws are to be concealed by a snap in cover.

#### 3.3 FASTENERS

All fasteners shall be of Stainless Steel, Aluminum, or Salt Sprayed Galvanized Steel providing maximum strength for security and weather protection.

#### 4.0 CLEAN UP

Manufacturer shall be responsible for transporting and disposing of the waste materials to a transfer station or disposal facility that can accept the materials in accordance with State and Federal regulation.

#### 5.0 WARRANTY

Submit a written warranty and signed by the manufacturer agreeing to promptly repair or replace units damaged due to defects in materials or manufacture.

All installation shall be guaranteed for a period of 1year, the product shall be free from defects in materials supplied for a period of 5 years after final acceptance of all materials and workmanship when installed and utilized for intended purposes, including but not limited to abnormal deterioration.

### 6.1 SUBMITTALS

#### 6.2 PRODUCT DATA

Manufacturer's specifications, test data, and installation instructions.

#### 6.3 SHOP DRAWINGS

For fabrication and erection of screen system units and fasteners. Include plan view layout and elevations.

#### 6.1 PRODUCT CODE CERTIFICATION

Provide verifiable documentation demonstrating that the product has been tested by an independent testing laboratory to meet or exceed requirements set out in Miami Dade County Notice of Acceptance Number NOA 10-0706.05 and Florida Building Code acceptance report number FL13771.

#### 6.2 PRODUCT APPROVALS

Prior product approval is required to be eligible for bidding. At a minimum of 10 days prior to the bid date a full sized sample with literature, valid Independent Laboratory Test Reports, Valid Miami Dade Notice of Acceptance Number, Florida Building Code Acceptance Report Number, Anchoring Reports stamped and approved by State of Florida Licensed Engineer and shop drawings at 1/8 scale must be submitted to the Architect, Owner or Authorized Agent for review and acceptance as well as other documents certifications and requirements in this specification.

#### 6.3 INSPECTION REPORT

Satisfactorily pass any inspections required by applicable regulations.

END OF SECTION