

# SCULPTMETAL™ INSTALLATION SPECS

## Medallions, Friezes & Architectural Grilles

### **PART 1 • GENERAL**

#### **1 • 1 DESCRIPTION:**

This section covers all material, labor, accessories and appliances necessary for the complete installation of SculptMetal™ metal matrix polymer composite ornaments as indicated on the drawings and specified herein.

#### **1 • 2 MANUFACTURER:**

All SculptMetal™ metal matrix polymer composite ornaments used in this work shall be manufactured by Pineapple Grove Designs, Palm Beach County, FL 33425, (800) 771-4595, and shall meet the specifications as indicated in the manufacturer's Tech Data sheets.

#### **1 • 3 SUBMITTALS:**

- A) Shop Drawings: Submit in accordance with Architect's Section. Indicate materials, construction, dimensions, locations, connections and installation details.
- B) Custom Work: Furnish dimensioned camera-ready line art of proposed custom designs to manufacturer.
- C) Product Data: Submit manufacturer's descriptive literature and installation instructions.
- D) Samples: Submit samples of SculptMetal™ material to architect for approval of color, shade, finish and material.

#### **1 • 4 ORDERING:**

All SculptMetal™ metal matrix polymer composite ornaments used in this work will be manufactured specifically for this project. Material order shall be placed with Pineapple Grove Designs immediately to prevent delays.

### **PART 2 • PRODUCTS**

#### **2 • 1 COMPOSITION:**

All SculptMetal™ metal matrix polymer composite ornaments shall be a matrix of proprietary ingredients including ground metal powders, fire suppressant materials, ground pigments, polymer binders, catalyzed urethane sealers and admixtures necessary to achieve required physical properties. Composite is reinforced with Kevlar™, carbon, glass and recycled cotton reinforced fiber.

#### ***Ingredients Include:***

- A) Metal Powder: Bronze, Nickel or Iron metal powders and powdered Aluminum filler (specific metal to achieve desired finish and texture) meeting ASTM B923-02.
- B) Kevlar™ Fiber: Continuous fiber strand bundles interwoven with other ingredients in matrix composition, meeting ASTM D629.
- C) Carbon Fiber: Continuous fiber strand bundles interwoven with other ingredients in matrix composition, meeting ASTM F988-86.
- D) Glass Fiber: Continuous fiber strand bundles interwoven with other ingredients in matrix composition, mix of virgin and ± 15% post consumer recycled glass meeting ASTM D578-00.
- E) Lignin Fiber: ± 5% post consumer recycled cotton fiber reinforcing particulate.
- F) Polymer Binder: Unsaturated polyester and isophthalic resins meeting ASTM D1201.
- G) Coloring: Inorganic synthetic iron oxide pigments meeting ASTM C979 dispersed integrally throughout the mix.
- H) Admixtures: Proprietary list of ingredients necessary to achieve required low permeability, accelerated cure, increased flexural and compressive strength, freeze-thaw resistance and flame suppression.
- I) Sealer: Catalyzed two part urethane topcoat meeting ASTM D1544-98.

#### **2 • 2 RELATED MATERIALS:**

- A) Mechanical Fasteners: 1/4" diameter 410 stainless steel threaded anchor TAPCON® screws ASTM B117.
- B) Offset Blocks: Predrilled and sized to match various profile dimensions of "Architectural Grille" forms to provide SculptMetal™ Architectural Grilles an enhanced shadow offset from substrate.
- C) Plugs: SculptMetal™ plugs sized to fit over fasteners in countersunk holes.
- D) Adhesive: Solvent based construction adhesive or epoxy cement manufactured by others specifically for vertical tile or composite bonding and incorporating sufficient bonding strength for the intended purpose.
- E) Joint Finishing: Caulked joints and perimeter shall be caulking sealant manufactured by others; type and color recommended by caulking manufacturer and approved by architect.

#### **2 • 3 FABRICATION:**

SculptMetal™ metal matrix polymer composite ornaments shall be manufactured in accordance with manufacturer's strict guidelines for ingredient ratios, material mixing and consolidation, mold surface integrity, color and finish uniformity and curing methods for maximum strength achievement.

#### **2 • 4 SHIPPING:**

All SculptMetal™ metal matrix polymer composite ornaments shall be carefully loaded and packed for transportation exercising customary and reasonable precaution against damage while in transit. All products shall be released to freight carrier in a sound, unblemished and unbroken condition.

### **PART 3 • EXECUTION**

#### **3 • 1 INSPECTION:**

- A) Inspect adjacent construction for conditions that would prevent proper installation of SculptMetal™ ornaments. Inspect substrate for soundness and surface adhesion quality.

- B) Inspect product in crates for any damage from shipping. Notify manufacturer of any hidden damage. Inspect product for any variations in color, finish, tolerance or design as shown on manufacturer's shop drawings or architect's plans. Report any discrepancy to manufacturer.

### **3•2 INSTALLATION:**

Install SculptMetal™ ornaments true, plumb and level in accordance with manufacturer's installation instructions (below) and Tech Data sheet. All pieces shall be set by experienced and qualified construction personnel familiar with construction trade practices and in accordance with the shop drawings and manufacturer's installation instructions. These instructions apply to all SculptMetal™ cast composite metal items including solid background ornaments and open background Architectural Grilles.

- A) Installer shall use necessary personal safety equipment to protect against hazard associated with fabrication, assembly and installation.
- B) All SculptMetal™ metal matrix polymer composite ornaments shall be installed according to the specifications included herein. Additional specifications shall apply if required. Ultimate connection design is the responsibility of Building Design Engineer, Architect or otherwise responsible person charged with the design connection.
- C) All substrate to receive SculptMetal™ items shall be prepared as indicated in manufacturer's Tech Data sheet. Substrate shall be clean of any oil, dust, debris or other material that may interfere with the successful installation of the item. Surface shall be smooth, level, sound and capable of a successful and permanent adhesion to the setting material and mechanical fasteners.
- D) Installation requiring adhesive material shall be prepared as per adhesive manufacturer's instructions. Generally, surface must be scarified to insure optimum bonding of adhesive to the substrate. SculptMetal™ surface to be bonded to adhesive must be treated similarly to substrate.
- E) All SculptMetal™ solid background ornaments secured to a substrate with adhesive must also be additionally secured with mechanical fasteners.
- F) Drill substrate and install TAPCON® fasteners as per TAPCON® manufacturer's instructions. Fasteners shall enter through the predrilled holes of the SculptMetal™ solid background ornament or Architectural Grille and be sufficiently tightened to securely fasten the item to the substrate. Care shall be made not to excessively tighten the fasteners which may result in pull through or breaking of the fastener.
- G) Install SculptMetal™ plugs, supplied by manufacturer, into countersunk holes over fasteners. Secure plug by first applying adhesive caulk to the inside surface of the countersunk hole. Gently tap in the plug until the shoulder of the plug is even with the finished surface of the item.
- H) After setting, all pieces shall be protected from damage by other trades. Any foreign matter splashed or rubbed on the pieces shall be removed immediately.

### **3•3 PATCHING:**

- A) The repair of chipped or damaged SculptMetal™ shall be done only by mechanics skilled in this work. Contact the manufacturer for instructions.
- B) SculptMetal™ shall show no obvious repairs or imperfections other than the minimal color variations when viewed with the unaided eye under good typical lighting.

### **3•4 CLEANING:**

SculptMetal™ metal matrix polymer composite ornaments shall be cleaned where necessary with a pH balanced mild detergent cleaner and a soft cloth and shall be rinsed thoroughly with clean running water. No acid or prepared cleaners shall be used without the approval of the SculptMetal™ manufacturer.

### **3•5 SEALING:**

SculptMetal™ metal matrix polymer composite ornaments are sealed at the factory during manufacture. No additional sealing is required.

## **PART 4 • HANDLING AND STORAGE**

### **4•1 HANDLING:**

All SculptMetal™ metal matrix polymer composite ornaments shall be received and unloaded at the project site by competent workmen with the necessary care and handling to avoid damage and soiling.

### **4•2 STORAGE:**

The pieces shall be stored on the job site in the same crating and packaging used for shipment. The packages and/or crates shall be stored on a level area clear of the ground and protected from the weather and other trades. If pieces are to be stored after uncrating, they should be placed carefully on edge and secured on non-staining supports. Pieces shall be stacked a maximum of one row high and protected from the weather and damage.