

## High-Density Cast Resin Architectural Products

### PART 1 GENERAL

#### 1.01 SUMMARY

- A. Section Includes:** High density cast resin architectural products, including columns, panels, caps, bases, trim elements and balustrade systems.

*Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties to extent necessary to link multiple components of a system and to interface with other systems.*

#### 1.02 REFERENCES

**A. American Society for Testing and Materials (ASTM)**

1. **ASTM E-84** - Standard Test Method for Surface Burning Characteristics of Building Materials.

#### 1.03 SYSTEM DESCRIPTION

**A. Products:** Manufactured from a two-part high density cast resin system with a closed cell structure

**B. General:** Products are available as ResinKast™ Architectural Products. Use catalog product numbers or specify custom work as noted on drawings and specifications.

**C. Acceptable Manufacturer:** Unique Originals, Inc. Miami, Florida.

**D. Performance Requirements:**

1. Density - Pounds / Cubic Foot .....	20
2. Comprehensive Strength - PSI .....	800
3. Tensile Strength - PSI .....	700
4. Elastic Modulus - PSI .....	18,000
5. Shear Strength - PSI .....	390
6. Shear Modulus - PSI .....	4,500
7. Strength - PSI .....	1,200
8. Flexural Modulus - PSI .....	40,000

**E. Density Requirements:** Areas within public access to be minimum 18-pound density. Areas outside public access to be minimum 15-pound density.

**F. Fire Rated Materials:** As an option, products can be manufactured from Class A fire rated materials / ASTM E84-90 Flame Spread Index: 20 Smoke Index: 225

*pecifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract Division 1 Submittal Procedures Section.*

#### 1.04 SUBMITTALS

**A. Product Data:** submit manufacturer's descriptive literature, specifications, installation instructions and limited warranty.

**B. Shop Drawings:** Submit full-scale details and method of installation.

**C. Samples:** Provide samples of standard design or profile of custom design.

**D. Quality Assurance Submittals:** Submit the following:

1. **Test Reports:** Certified test reports showing compliance with specified performance characteristics and physical properties.
2. **Certificates:** Product certificates signed by Manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.
3. **Manufacturer's Instructions:** Manufacturer's installation instructions.



## High-Density Cast Resin Architectural Products (continued)

**E. Closeout Submittals:** Submit the following:

**1. Warranty:** Warranty documents specified herein.

*Specifier Note: Article below should include prerequisites, standards, limitations and criteria, which establish an overall level of quality for products and workmanship for this section. Coordinate below article with Division 1 Quality Assurance Section.*

### 1.05 QUALITY ASSURANCE

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**A. Installer Qualifications:** Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

*Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed Conditions of the Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.*

**B. Regulatory Requirements:** (Specify applicable requirements of regulatory agencies)

*Specifier Note: Retain paragraph below for erected assemblies (either onsite or offsite) required for review of construction, coordination of work of several sections, testing, or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 1 Quality Control (Mock-Up Requirements) Section.*

**C. Mock-Ups:** Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

*Specifier Note: Edit paragraph below to specifying mock-up size.*

**1. Mock-Up Size:** (Specify mock-up size)

**2. Maintenance:** Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-ups when no longer required.

**3. Incorporation:** Mock-up may be incorporated into final construction upon Owner's approval.

*Specifier Note: Coordinate paragraph below with Division 1 Project Management and Coordination (Project Meetings) Section.*

**D. Preinstallation Meetings:** Conduct preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

*Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 1 Product Requirements Section.*

### 1.06 DELIVERY, STORAGE & HANDLING

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**A. General:** Comply with Division 1 Product Requirements Sections.

**B. Ordering:** Comply with manufacturer's ordering instruction and lead time requirement to avoid construction delays.

**C. Delivery:** Delivery, store and handle according to manufacturer's instructions.

**D. Storage and Protection:** Installation instructions contain storage and handling information.



## High-Density Cast Resin Architectural Products (continued)

### 1.07 PROJECT CONDITIONS

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- A. General:** Furnish and install in cooperation with other trades.
- B. Field Measurements:** Coordinate field measurements and shop drawings with fabrication and shop assembly.

*Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.*

### 1.08 WARRANTY

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- A. Project Warranty:** Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty:** Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents

*Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.*

- 1. Warranty Period:** Manufacturer offers a five (5) year limited warranty on all cast products against defects in material and workmanship as stated in literature commencing on date of product shipment. Warranty does not include installation efforts and workmanship.

*Specifier Note: Coordinate article below with Division 1 Closeout Submittals (Maintenance Materials) Section.*

### 1.09 MAINTENANCE

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**A. Extra Materials:** Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.

*Specifier Note: Revise paragraph below specifying size and percentage as required for project.*

- 1. Quantity:** Furnish quantity of (identify items) units equal to (specify %) of amount installed.
- 2. Delivery, Storage and Protection:** Comply with Owner's requirements for delivery, storage and protection of extra materials.

### PART 2 PRODUCTS

*Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.*

### 2.01 MANUFACTURED UNITS

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- A. Manufacturer:** Unique Originals, Inc.
- B. Product:** ResinKast™ Architectural Products

*Specifier Note Paragraph below is an addition to Section Format. Retain or delete paragraph below per project requirements and specifier's practice.*



## High-Density Cast Resin Architectural Products (continued)

### C. General:

1. **Ultra Violet:** If properly painted, not affected.
2. **Solvent Resistance:** Resistant
3. **Odor / Gas:** Normal conditions release no gases, odor-free.
4. **Vermin and Fungus Resistance:** Resistant.
5. **Insulation:** Greater insulating value than comparable wood products.
6. **Material:** High density resin system.
7. **Moisture Resistance:** Non-water absorbing.

### D. Decorative Products Manufacturing:

1. **Cast Parts:** Minimum solid wall thickness of 1/2 inch for contact-to-contact surfaces with a “maximum” distance of be 18 inches. All contact surfaces to be a minimum of 3/4 inches.
2. **Cast Parts:** Minimum solid wall thickness of 7/8 inches for contact-to-contact surfaces of “more than” 18 inches. All contact surfaces to be a minimum of 3/4” inches.
3. **Fire Rating:** Standard decorative **ResinKast™** products are “not” fire rated.
  - a. Optional fire rated Class 1 when made with **ResinKast™** E-84
4. **Fabrication Tolerance:** - 1/4 inch in 8 feet.
5. **Finishes:** **ResinKast™** “decorative” products are shipped from the factory with a minimum of two (2) coats of paint applied, a primer coat bonded directly to the product, and an acrylic topcoat, an optional 3rd coat of latex glaze may be applied dependent upon the texture and final finish requirements. It is not required to paint the product after field installation.

### E. Exterior Products Manufacturing:

1. **Cast Parts:** Minimum solid wall thickness of 1/2 inch for contact-to-contact surfaces with a “maximum” distance of contact -to-contact surface of 18 inches. All contact surfaces to be a minimum of 3/4 inches.
2. **Cast Parts:** Minimum solid wall thickness of 7/8 inches for contact-to-contact surfaces of “more than” 18 inches. All contact surfaces to be a minimum of 3/4 inches.
3. **Contact Surfaces:** Factory sand surfaces with 60 grit sand paper for full 3/4 inches of surface-to-surface contact to create a mechanical bond.
4. **Fire Rating:** Standard **ResinKast™** products are “not” fire rated.
  - a. Optional Class 1 fire rating when made with **ResinKast™** E84.
5. **Fabrication Tolerance:** 1/4 inch / 8 feet.
6. **Mesh:** Use 4.3oz. fiberglass mesh factory imbedded in molded resin a minimum of 4 inches, with an extension for overlap onto adjacent surface of 4 inches. Mesh may be imbedded continuously through the entire thickness with 4-inch minimum extension for overlap onto adjacent surface if more practical in manufacturing process.
7. **Anchor Tab:** Embed every 16” plastic anchor tab to secure element while adhesive cures.



## High-Density Cast Resin Architectural Products (continued)

**8. Finishes:** ResinKast™ “exterior” products are shipped from the factory with a “ready to paint” primer coat bonded directly to the product. The following guidelines should be used if you choose to apply paint to ResinKast™ products:

**a. Surface Preparation:** Before applying any paint to the product, the surface must be free of any contaminants, especially any dirt, grease or oils that may have been transferred to the product surface during installation or in transit from the factory.

**b. Paint Selection:** Choose a high quality exterior acrylic paint.

**F. Shipping:** Factory protected and shipped in poly bags.

### 2.02 PRODUCT SUBSTITUTIONS

**A. Substitutions:** No substitutions permitted.

### PART 3 EXECUTION

*Specifier Note: Article below is an addition to the Section Format. Revise article below to suit project requirements and specifier's practice.*

### 3.01 MANUFACTURER'S INSTRUCTIONS

**A. Compliance:** Comply with manufacturer's product data, including product technical data, product catalog, and installation instructions

### 3.02 EXAMINATION

**A. Site Verification of Conditions:** Verify substrate conditions, which have been previously installed under other sections, and are acceptable for product installation in accordance with manufacturer's instructions.

### 3.03 PREPARATION

**A. Surface Preparation:** Examine substrate. Clean and allow to dry as necessary. Do not install if substrate is wet or damp.

*Specifier Note: Coordinate article below with manufacturer's recommended installation details and requirements.*

### 3.04 INSTALLATION

**A. General:** Follow manufacturer's instruction sheets.

*Specifier Note: Coordinate article below with Division 1 Quality Assurance and Quality control sections.*

### 3.05 FIELD QUALITY REQUIREMENTS

*Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer, and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service is not required.*

**A. Manufacturer's Field Services:** Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

**1. Site Visits:** (Specify number and duration of periodic site visits)

*Specifier Note: Coordinate article below with Division 1 Execution Requirements (Cleaning) Section.*



## High-Density Cast Resin Architectural Products (continued)

### 3.06 CLEANING

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**A. Cleaning:** Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed product. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

*Specifier Note: Coordinate article below with Division 1 Execution Requirements Section.*

### 3.06 PROTECTION

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**A. Protection:** Protect installed product and finished surfaces from damage during construction.

