

## Part I – General

### 1.1 Scope

A. Furnish letters and hardware necessary to install Minnesota™ injection-molded plastic letters shown on drawings and herein specified.

### 1.2 Submittals

- A. Manufacturer's illustrated product literature and specifications.
- B. Installation instructions

### 1.3 Quality Assurance

- A. Manufacturer to have a minimum of 20 years experience in manufacturing letters.
- B. All letters to be manufactured by one manufacturer.

## Part II – Products

### 2.1 Acceptable Manufacturer or Manufacturer's Representative

A. Gemini Incorporated  
103 Mensing Way  
Cannon Falls, MN 55009  
Phone: 800-538-8377 or 507-263-3957  
Fax: 800-421-1256 or 507-263-4887  
Email: sales@geminisignproducts.com  
Web: www.GeminiSignProducts.com

### 2.2 Materials

- A. CAB (Cellulose Acetate Butyrate)
- B. Material tested to J2527, based on test parameters of SAE J1960 for UV exposure resistance.
  - 1. Specific heat of about 0.35. Specific Gravity 1.16-1.21
  - 2. Heat Combustion of approximately 10,400 BTU per pound (2.42 x 10<sup>7</sup> J/Kg).
  - 3. Self Ignition temperature of 880° F (470°C), using ASTM D 1929.
  - 4. UL94 Flame Class: 94HB. Flame Spread Index: 130 (NFPA 286: Group B: Flame Spread: 26-75)
  - 5. Burn rate of .08/min.
  - 6. Smoke Develop. Index: 416
  - 7. Thermal Expansion rate: .00008/inch.

### 2.3 General Construction

- A. Style: Injection molded in standard style, Architectural (prismatic), Helvetica, Optima, Roman, Standard Block, or Times Bold.  
Custom optional for National Programs.
- B. Sizes: available sizes by style, per catalog. Typical 4", 6", 8", 10", 12" high.
- C. Colors: pigmented white or painted any standard or custom color with liquid acrylic polyurethane, then oven baked.
- D. Profiles: Flat face or Prismatic Face (Architectural style only).
- E. Edges: sharp, square and clean with a consistent letter wall thickness.
- F. Depths ranging from 3/8"-1-1/2", based on style and size.

### 2.4 Mounting Hardware

- A. Mount Type: plain (no hardware), stud, pad, combination, or combination all.
- B. Hardware: 10/24 5052 alloy aluminum threaded studs, optional 302 alloy stainless steel threaded studs, pads, or a combination of the two. Typical studs are 2"-3" long.

### 2.5 Manufacture

- A. Letters shall be made of CAB plastic.
- B. Letter shall be \_\_\_\_\_ letter style, \_\_\_\_\_ color, and shall be \_\_\_\_\_ inches high, as indicated on the drawings.
- C. Mounting shall be \_\_\_\_\_ and a mounting template designating stud locations (IS / IS NOT) required for mounting on a \_\_\_\_\_ surface.

## Part III – Execution

### 3.1 Installation

- A. A qualified installer shall install Minnesota™ injection molded plastic letters.

### 3.2 Warranty

- A. Letters should be guaranteed for the life of the business against defects.

### 3.3 Maintenance

- A. Cleaning as needed per manufacturer recommendations.