

# Formed Plastic Letters and Logos



**The Process:** Sheets of plastic are heated until malleable enough to be draped over molds on a vacuum table. Suction is then applied until the sheet of plastic has taken the contour of the mold placed beneath it.

**The Material:** All formed letters and logos begin with Gemini's own raw material, Cellulose Acetate Butyrate (CAB). Unlike oil-based acrylics, CAB is a wood- and cotton-based plastic. Gemini sets the thickness of all CAB sheet at .143" – 15% thicker than other materials typically used in thermoforming. This provides added stability for letters and logos. In addition, Gemini tightly controls the extrusion process of the CAB sheet to guard against any surface imperfections.

## Technical Data on CAB:

1. A specific heat of about 0.35
2. A heat of combustion of approximately 10,400 BTU per pound (2.42 x 10<sup>7</sup> J/Kg)
3. An auto-ignition temperature of about 880° F (470°C)
4. UL94 Flame Class: 94HB
5. Burn rates for sheet, as determined in testing under ASTM Test Method D 635:
  - Approximately 1.0 in/min (2.6 cm/min) for .125" (3.18 mm) thick material
  - Approximately 0.8 in/min (2.1 cm/min) for .150" (3.81 mm) thick material

Our CAB is a "Group B" material, as rated by the NFPA. In addition, "Factory mutual" rates this material as a "class 4" commodity. In ASTM E84 testing, this material has a flame spread factor of 130, as referenced to a value of 100 for "red oak." The smoke density factor (or tunnel test) is 416, again as compared to a reference value of 100 for "red oak."

## Advantages of Formed Plastic Letters

### Variety

- Over 146 standard letter styles
- 38 standard colors
- Different face profiles available
- Excellent for Gold leafing
- Excellent for Backlighting with LEDs

### Economy

- Low Cost
- Added depth & dimension for low cost
- Recyclable plastic

### Quick Production

- 3 Days on Standard, 8 Days on Custom

### Customization

- Easily customized for your style or logo
- Seamless mix of custom and standard styles

### Durability

- Impact resistant
- Fade resistant (UV stable)
- **Guaranteed for LIFE**