

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
HIGH-PERFORMANCE RETROREFLECTIVE GLASS BEADS**

The following commercial high-performance retroreflective glass bead products have been tested and approved by the Office of Roadway Materials Testing, Chemical Testing Branch. These high-performance glass beads are typically applied in conjunction with a second ‘drop’ of AASHTO Designation M247, Type 2 beads when applying thermoplastic traffic stripes and pavement markings. Standard Special Provision 84-6 specifies the application process and application rate of both types of glass beads. High-performance glass beads are available in separate white and yellow colors for use with the corresponding thermoplastic stripe.

Suggested uses for these products include; increasing the nighttime visibility of thermoplastic traffic stripes in general, increasing the wet-night visibility of thermoplastic traffic stripes, and for enhancing the visibility of traffic striping in areas where reflective pavement markers cannot be used. The wet-night traffic stripe visibility advantage provided by high-performance glass beads is affected by the pavement’s texture and drainage efficiency. Best wet-night visibility is afforded when used on well-drained, open-graded asphalt concrete pavement. Please note that retroreflective pavement markers provide much better wet-night visibility than traffic stripes utilizing high-performance glass beads. Therefore, the use of high-performance glass beads in traffic stripes does not replace the use of retroreflective pavement markers, but can augment roadway delineation by providing brighter traffic stripes.

Any modification of the products below should be conveyed to the Chemical Testing Branch. Significant changes may result in the product being removed from the Authorized Material List pending retesting.

Individual batches of each product will require testing by the Chemical Testing Branch to assure compliance with specification requirements unless otherwise approved by the Engineer.

| Manufacturer | Product name | Phone number |
|-------------------------|---|---------------------|
| Potters Industries, Inc | Visimax | (888) 821-2968 |
| 3M | AW90 and AW91 Bonded Core Reflective Elements | (800) 553-1380 |
| Swarco, Industries, Inc | Plus9spots | (800) 216-8781 |

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