The following procedures are required to authorize high performance glass bead suppliers for inclusion on the Authorized Material List (AML). This program is administered by the Office of Roadway Materials Testing, Chemical Testing Branch. Specification requirements are in Sections 84-2.02E and 84-2.03C(2)(e) of the 2018 Standard Specifications.

1. For new materials the manufacturer will provide:
   B. Material/system data sheet with detailed performance information, properties and installation instructions. Data in this document will indicate that the system will meet the performance acceptance criteria.
   C. Safety Data Sheet.
   D. One-quart sample of the high-performance glass beads, yellow and white if the bead is integrally colored.

2. Performance acceptance criteria:
   A. Submit data from a test deck that indicates that after installation of the thermoplastic stripe with the post-applied glass beads, the traffic stripe shall, have a minimum retroreflectivity of 700 mcd m$^{-2}$ lx$^{-1}$ for white and 500 mcd m$^{-2}$ lx$^{-1}$ for yellow. Measurement will be in accordance with ASTM E 1710. Test deck striping shall be evaluated periodically for retained retroreflectivity and durability over a course of a year. The AASHTO National Transportation Product Evaluation Program (NTPEP) test decks have been successful in fulfilling this requirement.
   B. Confirm that glass beads contain less than 200 ppm each of arsenic and lead when tested under EPA Test Methods 3052 and 6010B or 6010C.
   C. They shall be either,
      • A composite bead made up of a central core with small high index glass beads (minimum of 1.8 refractive index) bonded to the outside of the core.
      • A solid, large glass bead with greater than 1.6 refractive index.
   D. Beads with integral color shall be supplied in white and yellow versions for use in corresponding white and yellow traffic stripes.

3. Send the submittal and sample to the Chemical Testing Branch.

Caltrans Transportation Laboratory
Attention: Lisa Dobeck, High-Performance Glass Beads
5900 Folsom Boulevard
Sacramento, CA 95819

When the submittal package has been evaluated and reviewed, the Department will notify the manufacturer of the findings. When any discrepancies are resolved to the satisfaction of the Department the material will be placed on the AML.

The authorization of High-Performance Glass Beads will expire in 5 years.

The Department reserves the right to sample, test and to remove the product from the AML at any time.

4. Reauthorization:
   Manufacturer should submit its package with current information to the Chemical Testing Branch at least 3 months prior to the listed expiration date.

   Contact the Chemical Testing Branch with any questions about this program.

   Lisa Dobeck at 916-227-7291 or lisa.dobeck@dot.ca.gov