

Standard Guidelines for Product Review

**Pavement Marking – Reflective Elements (Standard);
Section 00850**

March 3, 2010

DEPARTMENT OF
TRANSPORTATION

Construction Section
800 Airport Road SE
Salem, OR 97301-4798
503/986-3059

SCOPE - Reflective elements (glass beads) shall meet the requirements of AASHTO M 247, Type I with the following exceptions.

ARSENIC, ANTIMONY AND LEAD CONTENT – Reflective elements (glass beads) shall not contain more than the amounts listed for the following materials when tested according to EPA Test Methods 3052 and 6010C. Other suitable x-ray fluorescence spectrometry analysis methods may be used for screening purposes.

Arsenic	200 ppm (total)
Antimony	200 ppm (total)
Lead	200 ppm (total)

ROUNDNESS - Reflective elements (glass beads) shall have a minimum of 80 percent true spheres.

SPECIFIC GRAVITY - Reflective elements (glass beads) shall have a specific gravity of 2.40 to 2.55 at 77 °F.

ADHESION COATINGS - Reflective elements (glass beads) shall have an adhesion coating that is compatible with the paint to be used for the traffic line, as requested by the Agency or the marking manufacturer.

- Amino Functional Silane
- Acrylic Functional Silane
- Fluorocarbon-coated
- Amino/Vinyl Functional Silane
- Dual Coating Di-amino Functional Silane and Silicone Moisture Proof
- Silicone Moisture-Proof

QUALITY CONTROL - The manufacturer shall maintain an internal quality control program that will ensure that all reflective elements (glass beads) submitted for use meet the specifications herein. Copies of test results shall be available upon request.

Standard Guidelines for Product Review

**Pavement Marking – Reflective Elements (Standard);
Section 00850**

March 3, 2010

DEPARTMENT OF
TRANSPORTATION

Construction Section
800 Airport Road SE
Salem, OR 97301-4798
503/986-3059

Process - Submit the following:

- [Preliminary Information for Product Evaluation Form.](#)
- Independent Test Results for 3 batches showing compliance with Specifications listed above (AASHTO M247, Type 1 (modified) and heavy metal tests).
- Copy of manufacturer's internal quality control program
- Legible copy of the MSDS.
- Sample – Approximately 2 one-quart samples for evaluation.
- Specification Data Sheet and Brochure.

SUBMIT TO:

Oregon Department of Transportation – Materials Lab
Product Evaluation Coordinator
800 Airport Road SE
Salem OR 97301-4798
503-986-3059

<http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/QPL/QPIndex.shtml>