

**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISIONS  
FOR  
GLASS BEADS**

These Special Provisions revise, amend, and where in conflict, supersede applicable sections of the 1999 Standard Specifications for Highway Construction, English and Metric. Units of measurement are provided in the subsections in both English and Metric equivalents. The units for this project shall be those specified in the project plans.

*(Revise as follows:)*

**711.09. GLASS BEADS.**

(a) **Traffic Paint.** Glass beads used for traffic stripe paint shall meet the requirements of AASHTO M 247, Type I. Beads shall be supplied with a moisture-resistant coating.

(b) **Glass Beads For Thermoplastic.** Furnish drop-on glass beads in accordance with these specifications. Glass traffic beads shall comply with the following:

1. Be colorless, clean, transparent, and free from milkiness, excessive air bubbles, skins and foreign objects.
2. Contain less than 0.25 % moisture by weight.
3. Have a minimum refractive index of 1.5 when tested by the liquid immersion method at 77 °F.
4. Be spherical in shape, and essentially free of sharp angular particles, and particles showing surface scarring and scratching.
5. Show no evidence of objectionable static electricity when flowing through a regular traffic bead dispenser.
6. **Gradation.** *Oklahoma DOT Standard Glass Beads for Thermoplastic* shall meet the requirements of AASHTO M247, Type I.  
*Oklahoma DOT Large Glass Beads for Thermoplastic* shall meet the following requirements:

Open U.S. Std Sieves	Percent Retained
#10 Sieve	0
#12 Sieve	0-5
#14 Sieve	5-20
#16 Sieve	40-80
#18 Sieve	10-40
#20 Sieve	0-5
Pan	0-2

7. **Roundness.** *Standard* gradation glass beads shall be a minimum of 70% true spheres when tested according to ASTM D-1155. *Large* gradation beads shall be a minimum of 80 % true spheres. The manufacture shall provide a Type A certification for roundness for each shipment of *Large* beads
8. **Coatings.** Standard and Large glass beads shall be supplied with an adhesion coating to promote adhesion in thermoplastic pavement marking material. Standard glass beads (AASHTO M247, Type I), shall also be supplied with a moisture-resistant coating to prevent clumping.