

GLASS SPHERES, BISYMMETRIC (FLOATING TYPE)
FOR ROAD MARKING PAINT

NOTE: THIS SPECIFICATION AND ANY ACCOMPANYING SPECIFICATION OR BID CAN BE APPEALED.

YOUR APPEAL MUST BE SUBMITTED IN WRITING TO THE CITY PURCHASING DIRECTOR FOR ALL BIDS NO LATER THAN FIVE (5) WORKING DAYS PRIOR TO BID OPENING.

YOUR APPEAL MUST NOT ONLY IDENTIFY THE PROVISION, TERM OR CONDITION THAT IS CAUSING PROBLEMS, BUT ALSO YOUR PROPOSED ALTERNATE PROVISION, TERM OR CONDITION AND BE SUPPORTED BY TECHNICAL DATA, TEST RESULTS AND OTHER INFORMATION.

CONTACT THE APPROPRIATE PURCHASING AGENT OR THE PROCUREMENT SPECIALIST FOR APPEAL FILING INSTRUCTIONS.

APPEALS RECEIVED LATER THAN FIVE (5) WORKING DAYS PRIOR TO BID OPENING OR WITHOUT SUFFICIENT DETAILS WILL NOT BE CONSIDERED.

NOTICE!

A \$76.00 (CHECK OR MONEY ORDER) FEE IS REQUIRED WITH ALL BID APPEALS
THE \$76.00 FEE IS A PREREQUISITE FOR PURSUING THE APPEAL AND MUST ACCOMPANY THE APPEAL (SPECIFICATION AND RECOMMENDATION OF AWARD)

CAUTION: A BID THAT DOES NOT FULLY COMPLY WITH ALL OF THE PROVISIONS, TERMS, AND CONDITIONS OF THIS OR ANY ACCOMPANYING SPECIFICATION AND BID, **MAY** BE DETERMINED AS A COUNTEROFFER AND **MAY** RESULT IN THE BID BEING REJECTED FOR NON-RESPONSIVENESS.

- I. GENERAL: It is the intent of this specification to describe the minimum requirements for floating bisymmetric glass spheres to be purchased by the City of Milwaukee for the Department of Public Works, Traffic Engineering and Electrical Services Division.

All items, details of construction, services or features not specifically mentioned which are regularly furnished in order to provide floating bisymmetric glass spheres, shall be furnished at the bid price and shall conform in strength, quality and workmanship to that usually provided by the practice indicated in this specification.

II. AWARD AUTHORITY:

- A. The DOA, Business Operations Division, Procurement Services Section will be the sole judge of the quality and suitability of the equipment, materials and/or services offered in its determination of the successful bidder for bids that do not exceed \$30,000.
- B. The Central Board of Purchases will be the sole judge of the quality and suitability of the equipment, materials and/or services offered in its determination of the successful bidder for bids that exceed \$30,000.

III. WARRANTY: The seller and/or the manufacturer warrants that the goods sold hereunder will be of merchantable quality, will conform to applicable specifications, drawings, designs, samples or description, will be free from defects in material and workmanship and will be fit for the particular purpose intended by the buyer.

A. PROPERTIES OF SPHERES: Hemispherically embedded glass spheres shall conform to the following:

1. Refractive Index: The spheres shall have an average index of refraction not less than 1.50 nor more than 1.60 when tested by the liquid immersion method at 25°C.

2. Size: The glass spheres shall conform to the following graduation:

| <u>U.S. Standard Sieve Number</u> | <u>Percent Passing by Weight</u> |
|-----------------------------------|----------------------------------|
| U.S. 40 | 90 - 100% |
| U.S. 80 | 0 - 10% |

3. Percent Spheres: A minimum of 75% (by weight) of the spheres shall be true spheres when tested in accordance with ASTM-D-1155-53.

4. Flotation: A minimum of 90% of the glass spheres shall float on xylol (aromatic solvent) and a minimum of 75% of the glass spheres shall float on Heptane (Aliphatic Solvent), when tested as follows:

a. A single layer of spheres shall be spread on a clean, inverted pint tin can lid. Solvent shall be slowly introduced with a syringe or dropper at the edge of the lid until it overflows. The percentage of spheres floating on the solvent surface shall be estimated visually.

5. Color: The glass spheres shall be colorless to the extent that they impart no objectionable day or night-time hue to the binder when applied at concentrations equal to those used on road surfaces.

V. INSPECTION AND TEST: The City reserves the right to inspect and accept the spheres either at destination or at the point of manufacture. In either case the manufacturer shall furnish whatever samples and formulas are required to ascertain that the finished spheres comply with specifications. If factory inspection is required, the inspector shall be afforded all necessary facilities to make the inspection including 10 lb. containers for shipment of samples to the City laboratory. At the time when contracts are awarded, it will be decided (unless it was otherwise indicated in the invitations for bid) whether the materials are to be inspected at the factory or at destination, or both. **Any spheres not meeting the specifications shall be promptly replaced with satisfactory spheres, and all handling and transportation charges for such replacement shall be paid by the supplier.**

- A. If inspection at destination is selected the following procedures will be followed:
1. One bag of spheres will be selected at random from each shipment and will be forwarded to the City of Milwaukee Materials Laboratory for test. For this purpose split shipments will be considered as separate shipments at each shipping destination.
 2. The laboratory will select a sample from the bag and test it.
 3. If the sample meets the specifications, the shipment will be accepted. If it does not, five additional bags will be selected at random and tested by the Laboratory. If four or more of the additional samples meet the specification, the shipment will be accepted, but if two or more of the additional samples fail to meet the specification, the shipment will be rejected.
 4. Disposition instructions for rejected shipments will be requested from the vendor. If return of the spheres is requested, they will be returned by collect freight.
- VI. CONTAINERS: The spheres shall be shipped in waterproof bags with a capacity of 50 pounds of spheres, 40 bags per pallet with the bags securely cross-banded to the pallet. The bags shall meet ICC requirements for packaging this type of material and shall be sufficiently durable to withstand normal transportation and handling. The bags shall be completely closed by stitching or other suitable means on both ends. If a bag is leaking at the time of its arrival at a shipping destination, its entire contents will be rejected.
- VII. ADVANCE NOTICE OF SHIPMENT: For shipments to the City of Milwaukee, the shipper shall call Bruce Nelson at 1-414-286-5949 to allow for a 24 hour advance notice to consignee, City of Milwaukee, Department of Public Works, Traffic Engineering and Electrical Services Division, 1540 W. Canal Street, Milwaukee, WI 53233.
- For shipments to V.A.L.U.E. members, the shipper shall contact the agencies designee.
- VIII. PATENTED MATERIALS: The successful bidder will be required to assume all costs arising from the use of patented materials, equipment, devices, or processes used on or incorporated in the work, and shall agree to indemnify and save harmless the City and its employees from all suits or actions or any nature for or on account of the use of any patented materials, equipment, devices, or processes in connection with the reflective pavement marking materials furnished under these specifications.