

**Georgia Department of Transportation  
Office of Materials and Research**

**Standard Operating Procedure (SOP) 38**

**Inspection of Glass Beads**

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**I. General**

This Standard Operating Procedure presents an outline of the responsibilities of glass bead producers intending to furnish glass beads for use in work being performed under the auspices of this Department and the duties of Department personnel assigned to perform the inspection.

It is a function of the Inspection Services Branch of the [Office of Materials and Research](#) to randomly inspect and sample glass beads in order to determine if the manufacturer is in conformance with governing Specifications. In order to facilitate the accomplishment of this task, routine glass bead plant inspections and field sampling on a random basis will be performed to insure the quality of the glass beads.

**II. Producer's Certification**

**A. Application for Plant Approval**

A glass bead producer who wishes to furnish material to Department of Transportation projects must submit written application for plant approval to the Inspection Services Branch of the [Office of Materials and Research](#). The application must be submitted each year and include at least the following information.

1. The company name, plant address, names of the principal officers of the company, names of the plant manager and production superintendent.
2. An outline of the company's quality control program. This should include:
  - a. A brief description of the equipment used to test glass beads and all tests performed to insure quality of glass beads.
  - b. The manufacturer shall submit annual material safety data sheets for glass beads.

**B. Yearly Guarantee**

In addition, the producer shall submit a notarized [Yearly Guarantee](#) stating that all glass beads furnished for use on Department of Transportation, State of Georgia projects are warranted to meet all requirements of the governing Plans and Specifications. A "[Yearly Certification and Guarantee](#)" is attached for your completion and submittal to the Department.

The guarantee must carry the notarized signature of a responsible officer of the company with authority to bind the company to contract.

Applicants for glass bead plant approval must schedule an initial inspection with the Department. This inspection will include a review of the quality control techniques, quality control records and testing equipment. Provided the results of the initial inspection indicate an ability to consistently produce uniform glass beads which conform to the Specifications, the plant will be accepted to produce glass beads for the Department.

**III. Producer's Responsibilities—General**

**A. Quality Control**

Each producer listed on [Qualified Products List 71](#), shall have an approved quality control program that insures that all glass beads manufactured will meet the governing Specifications. The Office of Materials and Research will approve all quality control plans.

Each producer is required to perform quality control testing on each batch of glass beads to ensure that palletized glass beads do not collect moisture due to weather and humidity.

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Each bag of glass beads shall be legibly stenciled as outlined in AASHTO M 247

Each shipment of glass beads shall be free of damage. Care should be exercised to ensure that palletized glass beads do not collect moisture due to weather and humidity.

### IV. Office of Materials and Research Responsibilities

The [Office of Materials and Research](#) will monitor each producer's quality control procedures. This will include a review of the records of production, shipment, material control, testing, certification, and inspection. In addition, the Department shall randomly perform tests, visually inspect, and sample glass beads approved by the producer. Random inspections and sampling shall also be conducted on glass beads shipped to the Department or its registered contractor. The [Office of Materials and Research](#) will provide each producer with a copy of all test reports for any samples randomly selected.

### V. Reporting

All plants shall comply with the approved system of reporting each shipment of glass beads to a Department of Transportation Maintenance facility or registered contractor's facility. Each shipment shall be reported on a [glass beads shipment form](#). These reports shall be submitted to the [Office of Materials and Research](#) within one week of delivery. In addition, all shipment forms must be accompanied by certifications, which state actual test data for the glass beads shipment.

The [Office of Materials and Research](#) will review each report and if the information furnished is complete and correct, the reports will be distributed as part of the documentation for material approval.

### VI. Removal of Plants from the Qualified Products List

The State Materials and Research Engineer will remove any producer from the approved list due to failure to comply with any of the requirements of the governing Specifications, as well as failure to comply with any of the requirements in "Laboratory SOP 38."

The protocol for removal from the [Qualified Products List](#) during the calendar year shall be as follows:

First deviation – Verbal quality control warning.

Second deviation – Written quality control warning to company president and initiation of a 60-day probation period.

Third deviation – Removal from the [Qualified Products List](#) for a period of no less than 60 days. During this period, the producer shall not be allowed to make shipments of glass beads to any Georgia Department of Transportation construction or maintenance project.

### VII. Reinstatement to Qualified Products List

Once removed from the approved list, a producer may gain reinstatement after 60 days in the following manner:

#### A. Request for Reinstatement

The producer shall make a written request to the State Materials and Research Engineer asking to be reinstated to the approved list. The request should address the causes, which affected removal from the approved list. The producer should state measures taken to upgrade their quality control. A detailed quality control program must be submitted listing the type and frequency of tests proposed, along with the names of all testing personnel.

#### B. "Special Control" Status

If the submitted quality control program is approved, the producer will be placed on "Special Control." This status will last for a period of ten production days. During this period, the producer will report their quality control results to the Inspection Services Branch Chief on a daily basis. In addition, the producer's quality control efforts may be monitored by plant inspections during this time.

#### C. Reinstatement

If the producer's quality control is adequate and the State Materials and Research Engineer finds the producer meets the requirements for approved plants, the producer will be reinstated to the approved list.

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Georgene M. Geary, P.E.  
State Materials and Research Engineer

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Glenn W. Durrence, P.E.  
Director of Construction

**Yearly Certification and Guarantee**

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\_\_\_\_\_ (Company Name) \_\_\_\_\_ guarantees that all \_\_\_\_\_ (Type of Material) \_\_\_\_\_ furnished to State of Georgia projects in the forthcoming twelve (12) months will be in accordance with and will conform fully to the requirements of the governing Specifications and will be replaced without cost to the purchaser and State of Georgia when found not in conformity with any of the specified requirements. We certify that we accept full responsibility for determining the governing Specifications for each order and further certify that all materials furnished will meet the Specifications and details which apply to each order.

Very truly yours,

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Plant Location)

\_\_\_\_\_  
(Signature) (Date)

\_\_\_\_\_  
(Typed Name)

(Notary Public) \_\_\_\_\_ (Date)

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**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
OFFICE OF MATERIALS AND RESEARCH**

*GLASS BEAD SHIPPING REPORT*

Statewide Contract # \_\_\_\_\_ Contractor Lot # \_\_\_\_\_

Manufactured By: \_\_\_\_\_ Location \_\_\_\_\_

Contractor \_\_\_\_\_ Date Shipped \_\_\_\_\_

Type						
Batch Number						
Quantity						
Date Manufactured						

I certify the material covered by this report was manufactured to comply with the Department of Transportation, State of Georgia Standard Specifications Section 913.02. I further certify that the material herein has been subjected to the required testing and inspection as required in SOP 38. A copy of actual certification test data is attached and remains on file in our office.

\_\_\_\_\_  
Inspector Signature

Subscribed and sworn to before me, this \_\_\_\_\_  
day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
Notary Public