

**MINNESOTA DEPARTMENT OF TRANSPORTATION  
PAVEMENT MARKING QUALIFICATION AND ACCEPTANCE PROGRAM  
February 4, 2004**

## **INTRODUCTION**

This Pavement Marking Qualification and Acceptance Program has been developed and implemented to insure that quality pavement marking materials and glass beads are used on Mn/DOT highway projects.

The pavement marking materials covered by this Program include High Solids Water Based Traffic Paint, Plural Component Liquid Pavement Markings (epoxy, polyurathane, polyurea, MMA, etc.), pavement marking tapes, thermoplastics, and drop-on glass beads for all liquid pavement marking materials.

There are two major parts to this program:

1. Inclusion of a product on the Pavement Marking Qualified Products List.
2. Acceptance of a pavement marking material for use on a Mn/DOT project.

### **Scope**

This Program applies to all traffic marking materials for use on Mn/DOT highways. Participation in this program is also required to be considered for Minnesota's cooperative purchase contracts for pavement marking materials and glass beads.

Other political subdivisions are encouraged to review these requirements for adoption by their agency. Technical assistance by Mn/DOT is available on request to other political subdivisions in Minnesota.

## **PAVEMENT MARKING QUALIFIED PRODUCTS LIST**

Pavement marking materials are qualified by successful completion of a new products review process by Mn/DOT's Office of Traffic Engineering and Intelligent Transportation Systems (OTE/ITS). This program requires:

- Submittal of a product for consideration by the manufacturer or vendor
- Demonstration of the ability to manufacture traffic marking products and glass beads
- Placement of the product on the qualified traffic marking materials list on a provisional basis
- Application and review of the product on actual highway projects
- Addition to the Qualified Products List

### **Product Submittal**

Consideration of a pavement marking material or glass bead is initiated by the manufacturer or vendor by completion of the Preliminary Information for Traffic Control and Safety Product Information form and submittal of the form with all required documentation.

### **Demonstration of Manufacturing Ability**

Before materials are placed on the qualified products list and approved for field testing a manufacturer must demonstrate the ability to manufacture pavement marking materials meeting the requirements of Mn/DOT specifications. The manufacturer must:

- Conduct a Mn/DOT approved quality control program
- Demonstrate manufacturing capability
- Provide technical assistance
- Submit written agreement to this program

### Manufacturer Quality Control Program

A written quality control program that monitors a manufacturers production shall be submitted for Mn/DOT approval. This written program shall detail the frequency and types of tests performed on each lot produced for Mn/DOT projects as well as raw materials where appropriate. The written program must also demonstrate the manufacturer maintains a laboratory to scientifically control the product to assure accuracy and quality of the product.

### Manufacturing Capability

The manufacturer must state, in writing, that it has in operation a plant adequate for, and devoted to manufacturer of the specific pavement marking material. This statement must include assurance that the manufacturer is capable of producing batch or lot sizes consistent with the quantities to be delivered for pavement marking projects. This statement must also contain information that it has produced similar material over the past two (2) years with a successful record.

### Technical Assistance

The manufacturer shall have at least one technical representative available to instruct in the application of the pavement marking material. The technician shall be familiar with the application equipment process and materials, and shall have successful experience in application of pavement marking materials. The manufacturer shall also have at least one technical representative available to provide assistance to Mn/DOT Materials Laboratory personnel engaged in quality assurance operations. The manufacturer shall provide the name(s) and telephone number(s) for these representatives in the written agreement.

### Written Agreement

The manufacturer shall submit, in writing, a report containing all of the above criteria and a statement agreeing to the provisions of this Pavement Marking Qualification and Acceptance Program.

### **Provisional Approval**

Upon receipt of the product submittal the pavement marking section of the OTE/ITS will review the documentation and determine if the product should be included in operational field evaluation(s). The manufacturer or vendor will be informed in writing of the results of this review. If the result is to proceed with field evaluation the product will be placed on a provisional qualified product list. The provisions of this limited approval will be included in the letter.

### **Field Testing**

After receipt of provisional approval the pavement marking material is eligible for evaluation in actual construction and maintenance projects. Provisional pavement marking material shall be placed before August 1<sup>st</sup> so that it can be adequately tested prior to snowfall. Mn/DOT reserves the right to determine the duration and type of the evaluation needed for each product.

### **Final Qualification**

Upon successful completion of the required evaluation the pavement marking product or glass bead will be placed on the qualified products list.

## **PAVEMENT MARKING MATERIAL ACCEPTANCE PROGRAM**

The Minnesota Department of Transportation (Mn/DOT) will accept only qualified pavement marking materials for final acceptance on projects. Once a pavement marking material is placed on the qualified products list it is eligible to be used on Mn/DOT projects. To insure that the materials used will provide the same service as those tested during the initial qualification the following acceptance program has been established.

Acceptance of pavement marking materials and glass beads under this program is based on the manufacturer's certification and quality control testing verified by Mn/DOT Laboratory testing of verification samples and spot checks on samples obtained from contractor stock or from project sites. This sampling and testing is not intended as a Mn/DOT preapproval process. Mn/DOT testing is for verification of the manufacturer's quality control testing. Discrepancies in test results between manufacturer's lab and the Mn/DOT lab that indicate significant deviation from Mn/DOT specifications, which cannot be resolved, may result in removal of a material from the qualified product list.

This acceptance program requires the manufacturer to:

- Provide samples for Mn/DOT verification.
- Provide manufacturer's quality control test results.
- Supply shipping information.
- Certify that the material meets the requirements of Mn/DOT specifications.

### Verification Samples

The manufacturer shall submit verification samples, of quantities as required in the specifications, of each batch or lot manufactured. These samples shall be submitted to the Mn/DOT Materials Laboratory along with a certification stating the sample is representative of the batch manufactured and copies of all quality control reports.

Tests will be performed on these verification samples according to ASTM Standards, Federal Test Methods, or Mn/DOT Methods as detailed in the Mn/DOT product specification. Other test methods may be used upon approval by Mn/DOT.

### Quality Control Test Results

The manufacturer shall supply copies of all internal quality control test results to the Mn/DOT Laboratory for all batches or lots to be used on Mn/DOT projects. These reports shall include the name and address of the purchaser and state project number as appropriate.

### Shipping Information

The manufacturer shall provide shipping information for all batches and lots shipped for use on Mn/DOT projects to the Mn/DOT Laboratory. This information shall include the name and address of the purchaser and state project number as appropriate.

### Certification

Each shipment shall be accompanied by manufacturers written certification listing batch or lot number, quantity and certifying that the product meets the appropriate Mn/DOT specifications. A copy of the certification shall be submitted to the Mn/DOT Laboratory.

### **Compliance to Requirements**

Non-compliance to the provisions of this program may result in removal of a product from the qualified products list.

### **Mn/DOT Contact Information**

Samples, test data, certifications and shipping information shall be sent to:

Minnesota Department of Transportation  
Materials Laboratory  
1400 East Gervais St  
Maplewood MN 55109  
Phone: 651-779-5549  
Fax: 651-779-5616

Inquiries on the qualification and acceptance program can be sent to:

Minnesota Department of Transportation  
Pavement Marking Engineer  
1500 West County Road B2  
Roseville, MN 55113  
Phone: 651-634-5432  
Fax: 651-634-5445