TABLE OF CONTENTS

I. SCOPE ........................................................................................................................................... 2

II. GENERAL METHOD .................................................................................................................... 2

III. DEFINITION OF TERMS ............................................................................................................ 2

IV. STEPS IN PROCEDURE ............................................................................................................... 3

A. Achieving Approved List Status as a Primary Source ................................................................. 3

B. Maintaining Approved List Status as a Primary Source ............................................................ 3

C. Certifying and Shipping of Asphalt Emulsion by a Primary Source ......................................... 3

D. Sampling Asphalt Emulsion Shipments at the Project Site or Point of Use .............................. 4

Appendix – Form ................................................................................................................................. 5

Figure 1: 1 Quart Approved Sample Container
I. SCOPE

This Materials Method describes specific quality assurance procedures for asphalt emulsions intended for use in Department work. It encompasses:

A. Primary Source Approval Process

B. Certifying lots of asphalt emulsion by a Primary Source prior to their distribution and use in Department work.

C. Contractor sampling of asphalt emulsion from delivery vehicles for Department testing to determine final acceptability for use in Department work.

II. GENERAL METHOD

The Primary Source manufactures and certifies a fixed lot of asphalt emulsion to meet Department Specifications. The certified asphalt emulsion is then distributed to job sites. The material is sampled at the point of use and submitted to the Materials Bureau for testing. Final acceptability of the asphalt emulsion is determined by certification and tests performed on samples.

III. DEFINITION OF TERMS

A. Primary Source – The Primary Source is the manufacturer and certifier of the asphalt emulsion.

B. Department – The New York State Department of Transportation.

C. Materials Bureau – A Unit of the New York State Department of Transportation that conducts quality assurance testing of materials. The Bureau may be contacted at:

   New York State Department of Transportation Director of Materials Bureau
   50 Wolf Rd, POD 5-1
   Albany, NY 12232
   Materials Bureau Office: (518) 457-3240 / Fax (518) 457-8171
   DOT.SM.MO.MATERIALS@DOT.NY.GOV

D. Certified Lot – A lot of asphalt emulsion certified to meet specification by a Primary Source.

E. Lot Number – A number assigned by a Primary Source to each certified lot of asphalt emulsion.

F. Distributing Contractor – Contractor responsible for delivering and applying asphalt emulsion to a job site.

G. Form – The Certified Test Analysis form is issued by the Department. The form is completed and signed by the primary source and signed by the distributing contractor. The form certifies that the material meets NYSDOT specification.
IV. STEPS IN PROCEDURE

A. Achieving Approved List Status as a Primary Source

1. To become a Primary Source, an asphalt emulsion manufacturer shall submit a written request to the Department’s, Director of Materials.

2. The manufacturer will allow the Department to visit the production and shipping site to observe quality control activities, inspect the facilities, and to obtain samples for testing.

3. The manufacturer shall have storage tanks with following:
   - A minimum capacity of 10,000 gallons for each emulsion to be stored at the facility.
   - Capable of maintaining material homogeneity.
   - Capable of heating the material to the proper application temperature prior to shipment.

4. The manufacturer shall maintain or employ a lab capable of performing all testing required by the Material Specification.

5. The manufacturer shall have a process to document the type and amount of all emulsion certified. The documentation should include quantity of each emulsion and the amount of each emulsion presently stored in each tank.

B. Maintaining Approved List Status as a Primary Source

1. Primary Sources that have supplied material to Department projects will be inspected a minimum of once every three years by Department staff. The Department will observe QC activities, inspect the facility, and obtain a sample from a certified lot. The sample will be tested by the Materials Bureau and compared against the certification.

2. Primary Sources that have not supplied material to the Department for a period greater than three years will be required to meet with the Materials Bureau in order to remain on the Approved List.

C. Certification and Shipping of Asphalt Emulsion by a Primary Source

The Primary Source:

1. Manufactures and stores an asphalt emulsion.

2. Performs the required tests and determines that the results meet the specification.

3. Assigns a lot number to the asphalt emulsion to be certified. The lot numbers shall start with the 2 digit number for the year followed by a 3 digit number for the lot number. The lot numbers shall start with “yy-001” at the beginning of each calendar year. The number shall increase sequentially regardless of the item.

For example, the first lot, a medium setting emulsion, is assigned number “yy-001”; the second lot, a rapid setting emulsion, is assigned number “yy-002”; the third lot, a medium setting emulsion, is assigned number “yy-003”. (i.e. 11-002, 11-003, 11-004)

NOTE: After a lot has been certified no new material may be added to that lot.
4. Completes and submits the *Certified Test Analysis* form to the Materials Bureau.

5. Provides a copy of the signed *Certified Test Analysis* form for delivery to Department job sites.

6. Asphalt emulsion shall be homogeneous and show no separation of asphalt, after thoroughly mixing, within 30 days of manufacturing upon delivery.

   **NOTE:** Emulsions are only certified for 30 days from manufacture. After 30 days, the lot must be recertified and another *Certified Test Analysis* form must be submitted to the Materials Bureau. The recertified material will be issued a new lot number, and a new quantity of material certified. The Primary Source shall indicate that this is recertified material and attach the expired certification to the new Certified Test Analysis.

D. **Sampling Asphalt Emulsion at the Project Site or Point of Use**

1. The Inspector receives the *Certified Test Analysis* form for every delivery of asphalt emulsion to the job site. A copy of the form shall accompany the sample container to the Regional Lab.

2. The Inspector will witness the sampling of the asphalt emulsion and take possession of a sample at the frequency listed in the table below.

<table>
<thead>
<tr>
<th>Application</th>
<th>Sampling Frequency¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tack Coat</td>
<td>1 per project that is &gt; 500 gallons</td>
</tr>
<tr>
<td>Chip Seal, Microsurfacing, Slurry Seal, Fog Seal, Cold Recycling, Paver Placed Surface Treatment, Heater Scarification</td>
<td>1 per lot²</td>
</tr>
</tbody>
</table>

¹ This is a minimum sampling frequency. Additional samples may be taken.

² For very large jobs, the Engineer may opt for a lesser sampling frequency. The Engineer should contact the Regional Materials Engineer and/or the Materials Bureau for any reduction of sampling frequency.

**NOTE:** The Contractor shall sample the material, in the presence of a Department inspector, and is responsible for obtaining a representative sample. It is recommended that the Contractor draw off a minimum of one gallon of asphalt emulsion from the sampling valve prior to filling the approved sample container. The container shall be filled to where the sample container begins to neck (see Figure 1).

3. The inspector will attach a Site Manager label to the sample container after entering the sample (see Figure 1). When a Site Manager label cannot be provided the following information shall be written down and accompany the sample container: project number, sample time and date, reference marker location, lane, distributing contractor name, delivery vehicle number, delivered gallons at 60°F and inspectors name.

The sample will be forwarded to the Materials Bureau laboratory as soon as possible after sampling.

**NOTE:** Samples should not be exposed to freezing temperatures.
# New York State Department of Transportation

## ASPHALT EMULSION CERTIFIED TEST ANALYSIS

<table>
<thead>
<tr>
<th>Material Code</th>
<th>Grade</th>
<th>P- Polymer Modified</th>
<th>T- Tack Coat</th>
<th>C- High Volume Chip</th>
<th>Viscosity Saybolt 77°F</th>
<th>Viscosity Saybolt 122°F</th>
<th>Storage Stability 1-Day</th>
<th>Demulsibility</th>
<th>Classification Test</th>
<th>Cement Mixing</th>
<th>Ductility % (77°F)</th>
<th>Solubility %</th>
<th>Trichloroethylene</th>
<th>Float Test 140°F</th>
<th>Particle Charge</th>
<th>Softening Point</th>
<th>Elastic Recovery 50°F</th>
<th>Sieve Test %</th>
<th>Residue by Distillation %</th>
<th>Oil Distillate %</th>
<th>Penetration 77°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>702-3001</td>
<td>RS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3002</td>
<td>RS-1h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3101</td>
<td>RS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3102</td>
<td>HFRS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3201</td>
<td>MS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3301</td>
<td>HFMS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3401</td>
<td>HFMS-2h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3402</td>
<td>HFMS-2s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3501</td>
<td>SS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-3601</td>
<td>SS-1h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4001</td>
<td>CRS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4002</td>
<td>CRS-1h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4101</td>
<td>CRS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4201</td>
<td>CMS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4301</td>
<td>CMS-2h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4401</td>
<td>CSS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4501</td>
<td>CSS-1h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>702-4601</td>
<td>CQS-1h</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ANIONIC**

**CATIONIC**

**OTHER**

---

1 Fill all applicable fields for Straight Emulsions.
2 Polymer Emulsions, (702-___p, 702-___c) Fill Softening Point and Elastic Recovery Field
3 Material as Tack Coat (702-___t) fill "Tack Fields" only

---

**TO BE COMPLETED BY THE PRIMARY SOURCE**

I certify above test results represent the lot of material listed on the form. The material meets the appropriate specification.

**Printed Name** / **Signature** / **Date**

---

**TO BE COMPLETED BY THE DISTRIBUTING CONTRACTOR**

I certify material to be distributed is representative of this certification. It has not been modified and has been handled per the instructions of the certifying source company.

**Printed Name** / **Signature** / **Date**