

Section 822—Emulsified Asphalt

822.1 General Description

This section includes the requirements for homogenous emulsions of asphalt, water, and emulsifying agents.

822.1.01 Related References

A. Standard Specifications

Section 820—Asphalt Cement

B. Referenced Documents

AASHTO T 50

AASHTO T 59

822.2 Materials

822.2.01 Emulsified Asphalt

A. Requirements

1. Type

Use materials that do not contain lumps and that do not show separation during handling or storage of up to 30 days.

2. Grade

Use the various grades of emulsified asphalts that meet the requirements in Table 1.

Table 1—Requirements for Emulsified Asphalt

| Type Grade | Rapid Setting | | Slow Setting | | | | Prime | |
|---|---------------|------|--------------|------|------|------|-------|------|
| | RS-2h | | SS-1h | | SS-1 | | EAP-1 | |
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| Tests on Emulsion: Viscosity Saybolt Furol at 77 °F (25 °C), (Sec.) | | | 20 | 100 | 20 | 100 | 15 | 100 |
| Viscosity Saybolt Furol at 122 °F (50 °C), (Sec.) | 75 | 400 | | | | | | |
| (a).Settlement 5 Days, (Percent) | | 5 | | 5 | | 5 | | 5 |
| (b).Storage Stability Test 1 Day, (Percent) | | 1 | | 1 | | 1 | | 1 |
| (c).Demulsibility, 35 ml, 0.02N. CaCl ₂ (Percent) | 60 | | | | | | | |
| (d).Cement Mixing Test, (Percent) | | | | 2.0 | | 2.0 | | |
| Sieve Test, (Percent) | | 0.10 | | 0.10 | | 0.10 | | 0.10 |
| Oil Distillate by Volume (Percent) | | | | | | | 5 | 12 |
| Residue by Distillation (Percent AC) | 63 | | 57 | | 57 | | 50 | |

| Type Grade | Rapid Setting | | Slow Setting | | | | Prime | |
|---|---------------|------|--------------|------|------|------|-------|------|
| | RS-2h | | SS-1h | | SS-1 | | EAP-1 | |
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| Residue by Distillation (Percent AC) | 63 | | 57 | | 57 | | 50 | |
| Tests on Residue from Distillation Test: Penetration 77 °F (25 °C) 100 gm/5 Sec. (dmm) | 80 | 140 | 40 | 110 | 100 | 200 | | |
| Ductility at 77 °F (25 °C) 5 cm/min. (cm) | 40 | | 40 | | 40 | | | |
| Solubility in Trichloroethylene (Percent) | 97.5 | | 97.5 | | 97.5 | | 97.5 | |
| Float at 140 °F (60 °C), (Sec.) | | | | | | | 20 | |

- (a) The test requirement for settlement may be waived when the emulsified asphalt is used in less than five (5) days; or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than five (5) days.
- (b) The 24-hour (1 day) storage stability test may be used but does not predict that the 5 day settlement test will pass.
- (c) The demulsibility test shall be made within 30 days from date of shipment.
- (d) The cement mixing test shall be applicable only if material is used in Asphalt Slurry Seal.

B. Fabrications

General Provisions 101 through 150.

C. Acceptance

Test as follows:

| Test | Method |
|-----------------------------|-------------|
| Testing emulsified asphalts | AASHTO T 59 |
| Float test | AASHTO T 50 |

D. Materials Warranty

General Provisions 101 through 150.

Section 823—Cutback Asphalt Emulsion

823.1 General Description

This section includes the requirements for cutback asphalt emulsions.

823.1.01 Related References

A. Standard Specifications

Section 820—Asphalt Cement