

***Test for Compatibility of Aggregate and Emulsified Asphalt***

( REF: Coating Ability and Water Resistance - AASHTO T59 Sect. 74)

**Equipment:**

- One gallon size plastic milk jugs, clean and dry
- One stainless steel tablespoon and one big-spoon~3" wide (24 g delivery) with long handle
- A hose fitted with a spray nozzle where the water pressure can be controlled
- One roll of white paper towels
- Knife or scissors
- A flat surface such as a table, smooth pavement or board
- A disposable five gallon bucket for a waste
- A measuring cup

**Setup:**

- Cut the plastic milk jugs in half and save the bottoms for mixing containers
- Select a location near a water faucet where an asphalt spill may be easily cleaned up
- The location should be near a flat surface, spread two full size towels at each location where the sample can be deposited

**Procedure:**

- 1) Place one a half cuts (~465 grams) of air-dried Aggregate (78M) sample into the bottom portion of a plastic milk jug.
- 2) Add 0.5 (9mL) tablespoon of water and mix to dampen the aggregate.
- 3) Add one and a half big-spoons (~36 grams) of well-mixed emulsion.
- 4) Stir the mixture with large metal spoon until coated well (about 5 minutes).
- 5) Drain off excess emulsion into the five-gallon waste container. Stir.
- 6) Place 1/2 of the aggregate onto an absorbent paper towel.
- 7) Rinse the other half with gentle spray of water until it runs clear.
- 8) Place this rinsed aggregate on a separate towel.
- 9) Clean up and wait for samples to dry, then visually inspect them.

As the sample dries the aggregate becomes uniformly coated and rock stick to each other. Should the aggregate be lightly coated with asphalt, bare spots will be observed and the aggregate will not stick together well. The grading is as follows:

GOOD - Some pinpoints and sharp edges exposed.

FAIR - More coated than uncoated aggregate.

POOR - More uncoated than coated aggregate.

SEE NEXT PAGE FOR FIELD WORKSHEET.



M&T Chemical Procedure A-24

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