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METHOD OF TEST FOR RECOVERY FROM DEFORMATION OF LATEX MODIFIED ASPHALT EMULSION RESIDUE

CAUTION: Prior to handling test materials, performing equipment setups, and/or conducting this method, testers are required to read "SAFETY AND HEALTH" in Section E of this method. It is the responsibility of the user of this method to consult and use departmental safety and health practices and determine the applicability of regulatory limitations before any testing is performed.

A. SCOPE

This method of test is an indication of the amount of elasticity that a latex has imparted to an asphalt. This elasticity is an indicator of the percent of latex that has been added to the asphalt.

B. APPARATUS

1. Container: The sample container shall be a flat-bottom, cylindrical seamless tin box, 55 mm in diameter and 35 mm in depth. The container is commonly known as a 3-ounce ointment can.
2. Disc Assembly: See Figure 1. The disc shall be made of aluminum. The spider, pointer, and nut shall be made of steel.
3. Wrench: An 8 mm open-end or box-end wrench.
4. Timer: A stop watch, clock, or other timing device having a precision of 1 s or less.
5. A flexible plastic scale graduated to the nearest 1 mm.

C. PROCEDURE

1. Obtain the residue from six samples of latex modified emulsified asphalt in

accordance with California Test 331. Pour the hot residue from two of these samples into a container. Immerse a disk assembly into the molten asphalt, align the notches in the spider with the container so that the disc is centered, and adjust the disc height such that the asphalt surface is even with the top of the disc. Put the container and assembly into the 138°C oven to allow bubbles to escape and to break the surface tension around the disc. Prepare the next two assemblies similarly. After ten minutes in the oven, remove the containers and allow them to cool at room temperature for 2 h.

2. Mark the container for the reference points of 0° and 180° based on the pointer's location after mold preparation. Hold the container and spider rigidly. With a wrench attached to the top of the disc shaft, rotate the disc 180° and release it immediately. The rotation should be done at a steady rate taking approximately 5 s to accomplish. Begin timing the recovery at the release of the disc. After 30 s, mark the pointer's location on the container. Mark the pointer's location on the container again at 30 min. Repeat the procedure for the second and third samples.

D. CALCULATION AND REPORTING OF RESULTS

1. Calculate the percent recovery from deformation as follows:

$$\text{Percent Recovery} = 100 \frac{A}{B/2}$$

Where:

A = The arc on the container, in millimeters, between the mark at 30 s and the mark at 30 min, and

B = The circumference of the container, in millimeters.

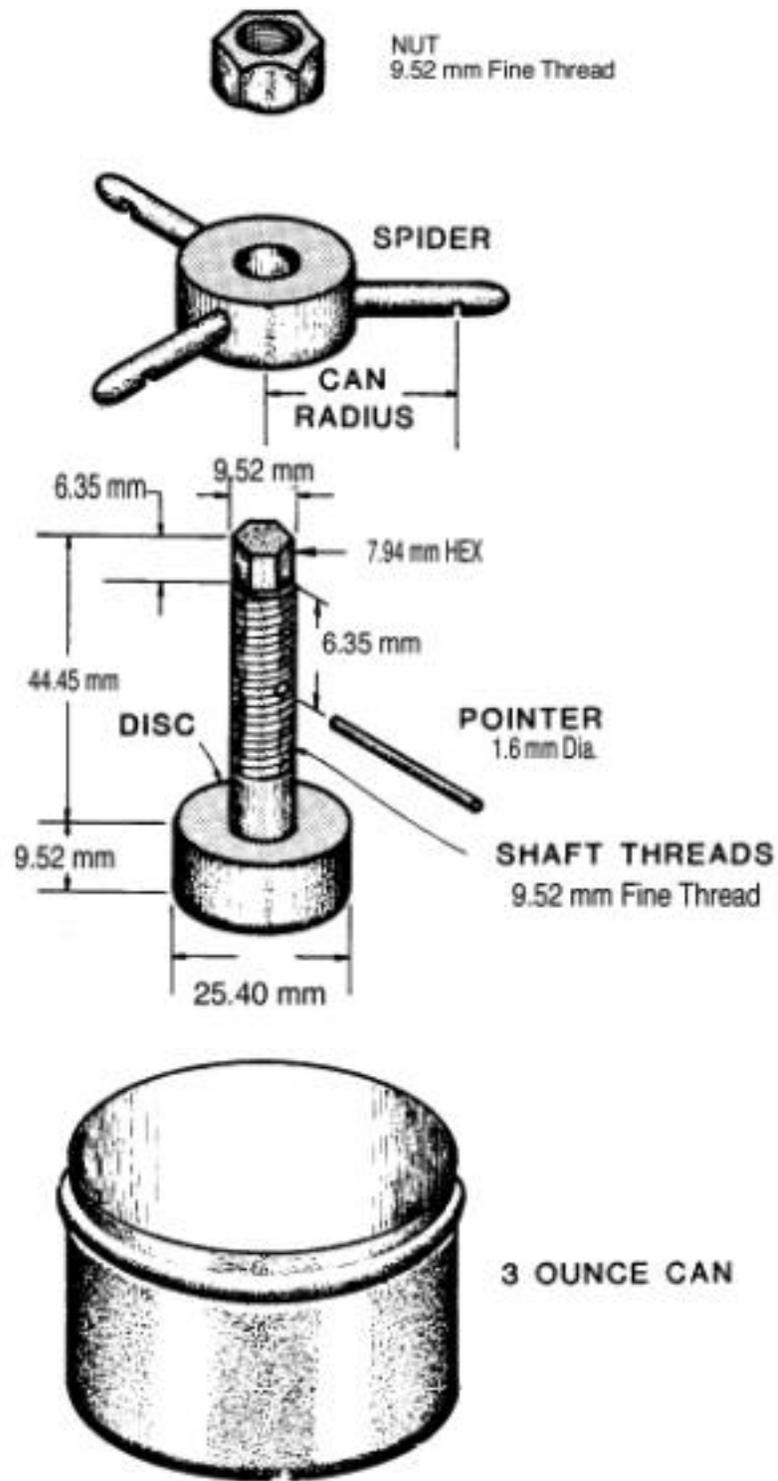
2. Report the percent recovery as an average of the three results.

E. SAFETY AND HEALTH

Prior to handling, testing or disposing of any waste materials, testers are required to read: Part A (Section 5.0), Part B (Sections: 5.0, 6.0 and 10.0) and Part C (Section 1.0) of Caltrans Laboratory Safety Manual. Users of this method do so at their own risk.

REFERENCE:
California Test 331

End of Text (California Test 332 contains 3 pages)



APPARATUS FOR RECOVERY TEST
FIGURE 1