COLD POUR CRACK SEALANT – ELASTIC RECOVERY

1.0 SCOPE

1.1 This test method describes the procedures for determining the Elastic Recovery of rubberized asphalt emulsion crack sealant.

2.0 APPARATUS AND PROCEDURES

2.1 Apparatus:
- Blotting paper, 2 pieces about 50 mm x 50 mm for each specimen
- Brass bars 3.2 mm thick (1/8") x 6 mm wide x 50 mm long, 2 for molding each test specimen
- Flat metal panels, any convenient size (75 mm x 175 mm is satisfactory)
- Silicone stop cock grease (or release agent)
- 2 support stands with clamps to hold the blotting paper in horizontal position 200 mm x 300 mm above bench top during test.
- Time or clock
- Metric ruler

2.2 Treat the brass bars and metal panel with silicone grease (or release agent) to prevent specimens from adhering to metal. Position 2 pieces of blotting paper exactly 25 mm apart on the treated panel. Set the 2 brass bars and fill with emulsion, leveling the emulsion off flush with the top surface of the bars to form a specimen exactly 6 mm wide between the blotting papers and extending about 30 mm over each blotting paper. Allow the specimen to cure thoroughly at least 4 days at 23◦C ($\pm$ 1◦) and 50% R.H. When the specimen is cured, remove the brass bars and loosen the specimen from the metal panel without stretching or distorting it. Position the stands, fix the blotting papers horizontally, one in each clamp, so that the test specimen is horizontal. Start a timer and slide one stand away from the other at a rate of 3 seconds per 25 mm, stretching the specimen from the original length of 25 mm to a length of 200 mm. During the next 9 seconds, return the blotting paper to the starting position of 25 mm apart forming a loop of stretched material between them. For asphalt sealers containing rubber, the loop will immediately begin to contract.

2.3 After 15 minutes, determine the loop size to the closest 2.5 mm, by measuring the vertical distance from the bottom of the loop to the inner edge of the blotting paper.

3.0 CALCULATE AND REPORT

3.1 Calculate percent Recovery as follows:

$$\% \text{ Recovery} = \frac{90 - \text{Loop Size after 15 minutes}}{90} \; x\, 100$$

3.2 Report the percent Recovery.