Test Procedure for

TEST FOR COLD APPLIED PLASTIC ASPHALT SEWER JOINT COMPOUND

TxDOT Designation: Tex-526-C

Effective Date: August 1999 – July 2026

1. SCOPE

1.1 Use this method to determine the asphalt content, percent volatiles, mineral matter, and consistency of cold applied plastic asphalt sewer joint compound.

1.2 The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.

PART I—CONE PENETRATION FOR CONSISTENCY

2. APPARATUS

2.1 *Standard cylindrical metal container,* 177 mL (6 oz.), with a flat bottom (ointment tin).

2.2 *Penetrometer,* conforming to ASTM D 5.

2.3 *Penetration cone,* conforming to ASTM D 217.

2.4 *Constant-temperature water bath,* conforming to ASTM D 5.

3. PROCEDURE

3.1 Thoroughly mix the entire material by stirring with a spatula to obtain a uniform sample.

3.2 Use the spatula to fill the tin carefully with the joint sealer compound. Press each added layer of material into the one below to prevent the entrapment of air in the sample. Smooth the surface level with the top of the can with the spatula or trowel.

3.3 Place the specimen in the constant-temperature bath at 25°C (77°F) for 1.5 hours.

3.4 Determine cone penetration value using a 150-g load and a release time interval of 5 sec.

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PART II—DETERMINING VOLATILE CONTENT

4. APPARATUS

4.1 *Silica dish,* approximate 91-mm (3.6-in.) inside diameter.

4.2 *Desiccator,* with general desiccant.

4.3 *Balance,* Class B in accordance with Tex-901-K, minimum capacity of 200 g.

4.4 *Standard electrical oven,* conforming to ASTM D 6, maintained at a constant temperature of 100°C (212°F).

4.5 *Electric muffle furnace,* capable of reaching 871°C (1,600°F).

5. PROCEDURE

5.1 Thoroughly mix the entire material by stirring with a spatula.

5.2 Clean a silica dish and thoroughly dry by heating it in the electric muffle furnace at 871°C (1,600°F).

5.3 Place the dish in a desiccator to cool and then weigh to the nearest 0.001 g.

5.4 Weigh an approximately 10 g sample of the material into the prepared silica dish. Use a spatula to spread the sample into a thin film on the bottom of the dish.

5.5 Weigh the dish and sample to obtain the initial weight of the sample to the nearest 0.001 g.

5.6 Place the sample dish in the constant temperature oven and allow it to heat at 100°C (212°F) for 24 hr.

5.7 Remove the sample dish from the oven and allow to cool in a desiccator.

5.8 Weigh the sample to the nearest 0.001 g.

5.9 Calculate the percent volatiles or volatiles loss at 100°C (212°F) by dividing the difference in initial and final weights by the initial weight.

5.10 Keep the sample to determine mineral matter.

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PART III—TEST FOR MINERAL MATTER

6. APPARATUS

6.1 *Electric muffle furnace,* capable of reaching 871°C (1600°F).

6.2 *Desiccator,* with general desiccant.

6.3 *Balance,* Class B in accordance with Tex-901-K, minimum capacity of 200 g.

7. PROCEDURE

7.1 Use the sample from Section 5.

7.2 Place the sample dish in muffle furnace at 871°C (1,600°F) for approximately 2 hr.

7.3 Remove the sample and place in a desiccator to cool.

7.4 Weigh the sample dish to the nearest 0.001 g.

7.5 Calculate the percent ash, or mineral matter, by dividing the difference between the final weight of the ash and the initial weight before volatiles determination by the initial weight, and multiplying by 100.

8. CALCULATIONS

8.1 Calculate the amount of base asphalt:

$$Percent\ \ Asphalt\ Content = 100 - (\%\,Volatiles + \%\ Ash)$$

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