

GDT 113

A. Scope

Use this test method to determine whether a releasing agent has a detrimental effect on hot mix asphalt (asphaltic concrete).

B. Apparatus

The apparatus consists of the following:

1. Beaker: Use two glass beakers, 0.3 qt and 0.6 qt (300 ml and 600 ml) or larger.
2. Oven: Use an oven capable of maintaining 300° F (149°C).
3. Pan: Use a clean, circular 18-in (450-mm) diameter stainless steel pan.

C. Sample Size and Preparation

1. For releasing agent samples obtained from the manufacturer, prepare and dilute the releasing agent according to the manufacturer's instructions. Test all samples from the field at the dilution rate at which they are being applied when sampled.
2. Obtain approximately 1.1 lbs. (500g) of loose Stone Matrix Asphalt (SMA). Ensure that this material is within specification limits for mixture composition.

D. Procedures

1. Place 500 ml of the diluted sample in a 600 ml beaker and allow to stand undisturbed at room temperature for 24 hrs. The product is unacceptable if any separation of the component ingredients occurs during this time.
2. Preheat the asphalt mixture to $315 \pm 5^\circ \text{F}$ ($157 \pm 3^\circ \text{C}$) in the oven.
3. Place enough releasing agent solution into the stainless steel pan to coat the bottom of the pan. Pour off excess.
4. Spread about 1.0 lb. (450 g) of the asphalt mixture onto one side of the coated pan.
5. Place the pan into the oven for one hour at $300 \pm 5^\circ \text{F}$ ($149 \pm 3^\circ \text{C}$).
6. After one hour, remove the pan from the oven. Tilt the pan approximately 45 degrees to cause the asphalt mixture to slide across the pan. Note whether any asphalt residue remains on the pan. The sample fails if it softens or dissolves the asphalt cement or if a significant amount of asphalt cement residue or particles of the mixture remain on the pan.
7. Place about 0.1 lbs (45 g) of the loose asphalt mixture into the beaker.
8. Cover the mixture with the releasing agent and allow it to remain undisturbed for one hour to see whether the releasing agent softens the asphalt cement.
9. Drain off the releasing agent and spread the sample on a clean paper towel to inspect. The sample fails if it softens or dissolves the asphalt cement.

E. Calculations

No calculations are necessary for this test.

F. Report

The Office of Materials and Research will inform the manufacturer of the releasing agent and, in the case of field samples, the Area Engineer and the contractor when a sample fails to meet this test.

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