



TEX-111-E

Determining the Amount of Material in Soils Finer than the 75 um (No. 200) Sieve



Why

To sustain proper moisture levels and attain compaction, a modest quantity of fines (complying with item 247 specifications) is essential. Excessive fines can have a 'lubricating' effect on the flex base aggregate, leading to a decrease in its load-bearing capacity.



When

- Item 247



How

Equipment

- Scale
- Oven maintaining $230 \pm 9^\circ\text{F}$
- Sample Splitter
- Water

Preparing Sample

- Sample materials in accordance with Tex-100-E
- Mix the sample thoroughly and split down to specified weight form procedure.

Procedure

- Place sample in an oven at $230 \pm 9^\circ\text{F}$ and dry to a constant weight.
- Weigh to the nearest 0.1 g. or lb. and record the weight of sample (WTotal)
- Soak material in water for at least 12 hours.
- Stack a No. 4 (only needed for coarser materials), No. 40 sieve onto a No. 200 sieve.
- Agitate the sample and pour the water of the stack of sieves, refill pan with water and repeat until the water runs through the sieves clear.
- Transfer the sample onto the stack of sieves and rinse under running water until the water runs clear.
- Move sample back into container and put in oven at $230 \pm 9^\circ\text{F}$ and dry to a constant weight.
- Weigh the dry sample to the nearest 0.1 g or lb. and record as the final weight (WWashed)

 **QUICK FACTS: SB 101 DRAFT** **Action**

- Calculations
 - Use the equation to calculate the percent passing the No. 200 sieve.

$$\% \text{ Passing}_{\#200} = 100 \times \left[\frac{W_{\text{Total}} - W_{\text{Washed}}}{W_{\text{Total}}} \right]$$

- Report
 - Report calculations to nearest 0.1%.